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CATALOGUE

OF

STARS NEAR THE ECLIPTIC,

OBSERVED

AT MARKREE, DURING THE YEARS 1851 & 1852,

AND WHOSE

PLACES ARE SUPPOSED TO BE HITHERTO UNPUBLISHED.

VOL. II.

CONTAINING 15,298 STARS.

Printed at the Expense of Her Majesty's Government, on the recommendation of the Royal Society.

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1853.

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PREFACE.

My expectation of completing this Second Volume of the "Ecliptic Stars" before the end of March, was frustrated, in consequence of the pressure of a public duty, combined with the delay arising from the occurrence of so many duplicate observations.

It cannot be permitted to issue from the press, without my acknowledgment of the great zeal and perseverance manifested by Mr. Graham, to whom I am indebted, almost exclusively, for the observations made during the eighteen months from 1st January, 1851, to 1st August, 1852, the results of which are herein recorded.

The number of stars now given amounts to 15,298, of which 35 have been found in M. Argelander's zones, and which are marked A. Z. in the Catalogue; but occurring, as they do, in the last month included in the present volume, it was considered best, for uniformity sake, to retain them. In future it is intended to exclude all stars which may be noted in the observations transmitted to us by that distinguished astronomer.

In addition to the stars whose approximate mean places are now given, there were observed 2,032 known stars, and 972 duplicates of those included in the first volume, =3,004; thus making the total number of observations made during eighteen months, =18,302, averaging upwards of 1,000 per month.

The former volume contained 14,888 stars. Of these 61 were subsequently ascertained to have been previously observed, and 7 were added in the errata sheet, leaving the actual number of supposed new stars in that volume, =14,834. The two volumes, therefore, contain 30,097 new stars, excluding M. Argelander's. The reductions and formation of the Catalogue fell into Mr. C. Robertson's and my hands, as Mr. Graham has been closely employed upon the star-charts, when not engaged in observations.

Edward J. Cooper.

Markree Castle, *May* 23, 1853.

APPROXIMATE MEAN PLACES

FOR JANUARY 1, 1850,

OF

1,520 STARS NEAR THE ECLIPTIC,

OBSERVED IN JANUARY, 1851, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
22	12	2 58 12	+20 5.9	8	9	3 3 13	+21 8.6*
22	12	58 22	20 4.0	22	11	3 33	19 52.1
22	9	58 31	19 53.9	22	11	3 38	19 52.5
8	11	58 51	21 4.0	22	11	3 39	19 51.3
8	10½	59 2	21 16.1	8	9	3 49	21 11.0
22	11	59 25	19 52.9	8	11	4 26	21 9.0
22	11	59 30	19 56.4	22	7	4 27	20 9.7
22	9	2 59 59	19 54.4	22	11	4 29	20 7.8
8	10½	3 0 18	21 11.1	8	8	4 36	21 4.7
22	10½	0 37	20 7.2	22	9½	5 34	19 57.2
8	9	0 38	21 14.2	8	10½	5 39	21 12.9
8	9½	0 39	21 18.6	22	9	5 47	20 0.9*
8	10	0 48	21 15.2	22	11	5 51	19 48.0
22	11	1 32	19 55.6	8	10½	6 3	21 14.8
8	10	1 39	21 15.6	22	10	6 14	19 52.4
8	11	1 40	21 3.5	8	11	6 18	21 12.9
22	9½	1 47	19 58.1	8	11	6 23	21 7.3
22	9	1 47	19 51.7	8	9½	6 28	21 9.1
22	10½	2 10	19 51.1	8	10½	6 58	21 14.0
8	9½	2 11	21 12.8	8	10½	7 1	21 14.8
22	11	2 24	19 52.3	22	10	7 17	19 57.6
8	11	2 43	21 6.5	22	9½	7 18	19 53.8
22	10½	2 58	19 51.4	22	12	7 37	19 51.9
22	10½	2 59	19 51.6	22	11	7 47	19 57.4
8	9½	3 3 3	+21 14.9	8	10	3 8 7	+21 1.3

*(4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
8	10	3 8 9	+21 8.5	3	10	3 14 20	+17 29.0
22	11	8 21	20 2.0	8	11	14 49	21 12.5
8	11	8 35	21 8.1	22	10	15 16	20 2.9
22	12	8 55	20 5.1	3	12	15 19	17 23.1
22	10	8 56	20 3.4	22	9	15 19	19 52.4
8	9½	9 15	21 2.8	3	12	15 30	17 22.9
3	10	9 58	17 28.7	22	11	15 33	20 3.1
8	9½	10 1	21 10.8	3	11½	15 36	17 28.4
22	9	10 4	20 11.7	3	10	16 10	17 27.6
8	9½	10 18	21 18.6	8	10½	16 11	21 18.0
8	10½	10 27	21 6.9	22	11	16 47	19 57.3
22	11	10 33	19 52.4	22	9½	16 51	20 6.8
22	10½	10 34	19 48.8	22	9½	16 51	20 9.2
3	11	10 40	17 10.4	22	9½	16 53	20 7.7
3	10½	10 54	17 12.5	3	9	16 57	17 18.0
22	11	11 1	19 51.8	3	10	17 38	17 13.1
22	9	11 17	19 51.8	3	9½	17 47	17 11.7
8	11	11 20	21 8.9	22	11½	18 2	20 4.8
3	10	11 35	17 10.4	8	9½	18 13	21 12.2
3	10	11 48	17 24.5	22	9	18 15	19 55.8
8	11	11 48	21 13.6	8	10½	18 20	21 16.2
8	9½	12 7	21 6.6	3	10	18 46	17 25.9
3	11	12 14	17 24.1	3	11	18 50	17 21.9
22	7	12 22	20 6.0	3	10	19 11	17 26.9
22	9	12 32	19 55.4	3	9½	19 15	17 25.4
22	9½	12 38	20 4.2	8	11	19 52	21 13.8
8	11½	13 9	21 2.4	3	11	19 54	17 28.9
3	10½	13 14	17 14.4	3	10	20 20	17 25.0
3	10½	13 29	17 16.7	22	11	20 31	20 6.9
3	10	13 31	17 14.9	8	10	20 39	21 12.5
3	10	13 41	17 11.3	22	11½	20 39	20 6.8
22	9½	13 43	20 9.2	3	9	20 47	17 16.0
22	10½	13 50	20 2.9	22	10½	20 50	20 7.7
22	10½	13 57	19 56.7	8	10½	20 51	21 11.4
8	11	3 14 15	+21 12.2	3	11	3 20 56	+17 24.8

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
3	11	3 21 11	+17 24.2	22	11	3 29 3	+19 58.2
3	10½	21 11	17 25.2	22	11½	29 7	19 55.8
22	11½	21 29	20 4.8	3	10	30 0	17 26.5
22	10½	22 6	19 56.9	8	10	30 9	21 22.5
22	11	22 16	20 8.4	22	8½	30 9	19 53.7
3	10	22 19	17 17.3	22	10	30 24	19 58.0
8	9½	22 39	21 17.1	3	10	30 46	17 10.8
8	10	22 45	21 18.6	3	9	30 52	17 23.8
8	9½	23 15	21 7.6	22	11½	31 0	20 8.7
22	10	23 16	20 3.5	8	9½	31 4	21 12.3
22	10½	23 42	20 2.9	22	10	31 5	20 6.4
22	11	23 44	19 58.5*	3	11	31 30	17 15.4
3	9½	23 55	17 10.3	22	11	31 33	20 7.4
22	9	24 2	20 4.3	3	9½	31 39	17 26.3
3	10	24 13	17 9.2	3	10½	32 38	17 27.2
22	11½	25 12	20 5.1	3	10	32 41	17 27.9
3	11	25 13	17 19.5	8	9½	33 6	21 18.1
22	9½	25 19	20 3.4	8	10½	36 23	21 21.5
3	10½	25 20	17 28.5	8	9	36 24	21 13.8
8	9	25 25	21 13.3	8	10	37 28	20 58.9
22	9½	25 49	20 1.7*	8	10	37 54	21 3.0
22	9½	25 56	20 5.6	8	8½	38 6	21 11.2
3	10	25 58	17 11.6	8	10½	38 33	21 5.7
3	10½	26 7	17 14.5	8	10½	38 47	21 3.7
22	10	26 35	20 3.2	8	10	39 37	21 3.4
8	9	27 6	21 13.1	8	8½	39 42	21 19.9
22	10	27 16	20 6.5	8	10	41 0	21 9.0
22	10	27 30	20 8.8	8	11½	41 1	21 16.9
3	11	27 54	17 23.6	8	9½	41 15	21 15.5
3	10	28 14	17 16.0	8	10	42 52	21 3.9
3	11	28 22	17 15.5	8	10½	42 55	21 12.8
3	10	28 31	17 16.3	8	10½	43 5	21 5.4
3	10	28 32	17 21.0	22	11½	51 28	23 43.1
8	11	28 56	21 21.4	22	11	51 46	23 42.7
22	10½	3 28 56	+20 4.0	22	9½	3 52 1	+23 43.4

*(4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
22	9½	3 52 4	+23 41.3*	31	12	4 11 29	+24 27.0
22	10½	52 4	23 44.0	31	10	11 49	24 29.8
22	11	53 22	23 42.3	31	9½	12 12	24 28.4
22	10½	53 56	23 40.2	22	10½	12 13	23 48.0
22	10	54 9	23 41.7	22	11	12 20	23 39.2
22	10	54 9	23 30.5	22	10½	12 32	23 46.7
22	10½	55 9	23 31.4	31	10½	13 1	24 40.4
22	11	56 40	23 32.3	22	10	13 2	23 48.8
22	10	57 54	23 43.2	31	10½	13 39	24 35.0*
22	10	58 3	23 43.2	22	10	13 41	23 48.5
22	11	3 58 34	23 38.1*	22	10	13 44	23 47.0
22	10	4 1 3	23 41.6	31	9½	14 0	24 24.6
22	11½	1 11	23 44.8	22	11	14 31	23 37.3
22	10	3 8	23 35.3	31	11	14 32	24 27.6
22	10	3 17	23 39.2	22	10	14 34	23 47.4
22	12	3 51	23 38.1	22	10	14 34	23 48.1
22	10	4 37	23 34.9	22	10½	15 1	23 38.0
22	12	4 42	23 47.2	31	11	15 9	24 44.5
22	12	4 53	23 48.1	31	11½	15 32	24 43.2
22	11	5 18	23 29.8	31	12	16 5	24 43.7
22	11½	6 2	23 43.4	22	10	16 36	23 46.9
22	11	6 31	23 46.2	31	9½	16 46	24 42.2
22	10	6 32	23 43.5	22	10	16 54	23 40.3
22	9½	6 41	23 48.4	31	12	16 56	24 41.5
22	11	7 29	23 32.3	31	12	17 4	24 42.5
22	11	7 50	23 31.0	31	12	17 16	24 43.6
22	12	8 37	23 46.1	22	11	17 18	23 36.1
22	10	8 45	23 48.8	22	11½	17 27	23 45.6
22	10	9 3	23 34.4	22	10	17 31	23 43.0
22	9½	9 41	23 34.7	22	10	17 41	23 46.7
22	10½	10 5	23 36.2	31	11½	17 53	24 45.0
22	9½	10 13	23 30.0	31	11	18 6	24 44.0
22	11	10 20	23 35.1	22	11	18 30	23 48.3
22	10	11 1	23 30.5	22	10	18 56	23 46.2
22	10½	4 11 19	+23 30.1	31	10	4 19 16	+24 40.1

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
22	10	4 19 24	+23 48.6	8	10½	4 26 24	+23 56.1
31	10	19 29	24 29.4	24	11	26 31	24 12.8
22	10½	19 50	23 50.4	24	10½	26 32	24 27.2
8	10	20 5	24 1.5	22	10½	26 54	23 33.3
8	10	20 17	23 59.1	22	10½	27 4	23 33.5
31	11	20 35	24 31.0	31	10½	27 24	24 42.9
31	11	20 44	24 32.9	22	9	27 27	23 38.5
22	12	20 58	23 36.9	31	11	27 31	24 32.3
8	10	21 26	24 1.8	31	10½	27 31	24 36.5
31	12	21 41	24 43.4	8	9½	27 39	24 7.4
31	11½	21 44	24 45.1	24	10	27 41	24 17.0
22	10	21 56	23 39.2	24	11½	27 44	24 13.2
22	11	22 45	23 37.5	8	9	27 45	23 54.2
31	10	23 16	24 38.0*	24	12	27 48	24 15.7
31	10½	23 19	24 43.4	22	11½	27 50	23 32.6
31	12	23 26	24 38.2:	31	10½	28 9	24 34.6
31	10	23 44	24 40.8	8	10	28 17	24 9.8
22	10	24 3	23 50.5	24	10	28 28	24 19.9*
8	10	24 31	24 1.9*	8	10½	28 39	24 4.1
31	10	24 37	24 27.6	8	10	28 48	24 8.6
22	11	24 48	23 31.5	8	10	28 50	24 6.7
24	12	24 53	24 28.7	22	11	28 52	23 30.7
22	10	25 4	23 38.5	24	11	28 52	24 24.8
22	11	25 4	23 31.6	24 31	11	29 12	24 26.1
31	9	25 12	24 39.6	31	11	29 22	24 31.8
24	11½	25 24	24 9.7	22	10½	29 23	23 35.4
24	10½	25 32	24 15.2	31	10½	29 31	24 35.5*
31	9	25 33	24 42.0	22	11	29 35	23 35.7
31	11½	25 43	24 37.9	22	11	29 45	23 30.7
24	11½	25 51	24 9.8	31	12	29 48	24 35.7
31	11	26 6	24 38.0	22	11	29 50	23 35.5
31	10	26 8	24 37.7	8	10	29 54	23 59.6
31	10½	26 15	24 30.2	24	11½	30 30	24 27.2
8	10½	26 16	23 56.6	8	10	30 36	23 53.3
8	10½	4 26 17	+23 55.2	24	10½	4 30 37	+24 26.1

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
24	10½	4 30 47	+24 27.4	31	12	4 36 0	+24 29.6
22	10	31 3	23 44.1	22	10½	36 7	23 44.5
22	11	31 6	23 46.4	22	10½	36 15	23 42.3
31	8	31 13	24 45.3	8	10	36 17	24 3.7†
31	11	31 15	24 32.1	24	10	36 27	24 10.3
8 24	9	31 27	24 8.6	8	10	36 32	24 1.9
31	11½	31 27	24 36.2	22	10½	36 40	23 47.9
24	12	31 43	24 14.7	24	11½	36 46	24 7.7
31	11	31 58	24 33.3	22	9	36 55	23 38.2
22	10½	32 6	23 32.2	31	11	37 18	24 45.4
24	11	32 18	24 21.7	8	10	37 25	23 53.3
8	9½	32 22	23 52.4	24	11½	37 46	24 16.9
8	10	32 24	24 1.6	22	11	37 53	23 42.3
31	9	32 50	24 31.6	22	11	38 4	23 44.8
8	10	33 2	23 53.3	24	11½	38 8	24 17.3
8	10	33 10	23 55.1	24	12	38 9	24 25.7‡
22	10½	33 21	23 31.5	31	10	38 20	24 28.3
22	10	33 24	23 34.8	8	8½	38 22	24 4.8
31	10	33 25	24 34.3	12	11	38 31	23 42.6
24	9	33 34	24 23.8	22	11	38 37	23 45.3
22	9	33 51	23 33.6	31	10½	38 47	24 27.7
31	11½	33 52	24 42.1	8	10½	38 54	23 57.5
31	10	34 8	24 38.5	8	11	39 3	24 5.8
8	9	34 18	23 54.9	22	11	39 33	23 34.0
24	10	34 39	24 21.8	22	12	39 38	23 34.5
22	11	34 54	23 33.8	24	11	39 38	24 19.6
24	11½	34 59	24 22.2	31	9½	39 39	24 34.2
24	12	35 2	24 11.0	24	12	39 42	24 13.6
22	10½	35 3	23 31.3	8	10	40 7	23 53.6
24	11	35 3	24 16.2	31	10	40 42	24 33.3
8	10	35 8	23 56.5	22	10	40 44	23 35.5
8	10	35 8	23 48.8	24	11	40 54	24 12.6
22	10	35 15	23 38.3*	31	11	40 54	24 30.8
31	10	35 29	24 28.0	31	12	41 15	24 41.5
31	10	4 35 37	+24 28.4	24	11½	4 41 23	+24 14.2

* (4). † S. of double. ‡ S *f.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
24	10½	4 41 30	+24 12.1	25	10½	4 46 25	+24 52.5
31	10½	41 31	24 39.1	8	11	46 29	23 56.3
8	8½	41 55	23 51.6	24	10½	46 31	24 20.1
22	11½	42 0	23 29.9	31	9	46 39	24 36.6
31	11	42 5	24 44.3	8	11	46 41	23 53.9
8	11	42 14	24 2.8	31	11	46 46	24 28.7
24	11½	42 31	24 23.7*	25	10	46 56	25 0.7
31	9½	42 33	24 43.1	31	11½	46 57	24 29.7
24	10	42 37	24 23.9	8	10	47 3	23 53.9
31	10	42 38	24 45.9	25	9	47 4	25 6.0
24	9½	42 49	24 10.0	8	9	47 5	24 0.0
31	10	42 55	24 41.5	25	11	47 14	24 58.4
24	10	42 57	24 14.9	8	10	47 40	23 54.8
31	10	43 12	24 42.3	31	10	47 44	24 28.8
31	11	43 35	24 30.7	8	10	47 51	23 55.1
24	11½	43 47	24 8.6	24	11	48 0	24 14.5
24	12	43 54	24 11.0	24	12	48 2	24 15.2
8	11	44 1	24 4.5	8	9	48 4	24 5.2
8	10½	44 2	23 59.9	31	11	48 19	24 30.5
31	9	44 5	24 43.9	8 24	9	48 20	24 8.7
24	9½	44 8	24 27.5	25	9½	48 49	24 57.9
31	10	44 37	24 35.4	25	11	48 52	25 2.0
24	10	44 42	24 23.9	25	10½	48 52	24 51.0
31	9	44 51	24 34.6	25	11	49 5	25 1.5
8	10½	44 56	23 59.3	8	10	49 8	23 51.8
24	9½	45 2	24 25.9	24	10½	49 32	24 21.7
8	10	45 10	23 57.1	2 31	10	49 36	24 38.8
31	11	45 10	24 34.9	24	11	49 37	24 20.9
24	10½	45 22	24 21.4	24	10½	49 37	24 23.2
31	11	45 36	24 37.8	25	10	49 41	25 2.4
24	10	45 37	24 27.9	8	11	49 58	23 53.7
8	11	45 46	24 6.1	31	10	50 2	24 28.8
31	12	46 0	24 42.7	2 31	10½	50 7	24 39.7
24	10½	46 11	24 20.6	8	10½	50 10	23 57.7
24	9½	4 46 14	+24 13.2	2 31	10½	4 50 15	+24 38.5

* S. of double.

Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′
8	10½	4 50 19	+23 55.6
25	11	50 25	24 52.3
8	11	50 33	23 56.0
8	9	50 49	23 57.7
24	10	50 51	24 13.8
24	11½	50 53	24 12.0
24	11½	50 59	24 9.3
31	10	51 2	24 31.3
25	11½	51 5	24 51.2
24	10½	51 6	24 15.7
25	11½	51 15	24 50.4
2	10	51 34	24 46.8
2	10	51 36	24 45.9
24	11½	51 44	24 12.3
8	10½	51 48	24 4.9
31	10	52 3	24 39.8
24	11	52 4	24 15.3
31	10	52 8	24 34.0
2 31	11	52 9	24 42.7
25	10½	52 9	24 53.2
8	10½	52 18	24 5.1
24	12	52 25	24 17.0
8	9½	52 29	24 7.1
24	10½	52 30	24 15.7
2	11	52 31	24 47.7
24	10½	52 40	24 11.4
8	10	52 42	23 54.5
8	10½	52 50	23 55.2
25	11½	52 50	24 53.2
25	11	52 53	24 51.3
25	10½	52 54	25 1.2*
31	11	53 10	24 28.7
2	9½	53 11	24 38.3
24	9	53 16	24 15.9
25	11	4 53 16	+24 50.4
2	10	4 53 19	+24 48.0
31	11½	53 22	24 30.8:
24	9½	53 32	24 25.0
24	9½	53 39	24 27.0
31	10	53 49	24 31.0
2 31	10	53 51	24 32.7
2	9	53 53	24 37.4†
25	10½	54 6	24 49.0
31	10	54 9	24 33.9
8	10	54 17	24 2.4‡
31	9½	54 19	24 31.1
24	12½	54 21	24 26.7
8	10	54 27	24 6.3
8	10	54 31	23 53.7
24	10½	54 32	24 27.4
25	12	54 42	24 53.2
15	11	54 50	24 47.4
2 31	10	54 52	24 42.4
25	10	54 59	25 4.4
2 31	10	55 7	24 45.1
25	11½	55 30	24 53.0
24	10	55 32	24 21.5
8	10	55 39	23 54.2
24	10	55 40	24 10.9
8	9½	55 41	23 53.1
24	10	55 42	24 22.3
24	10½	55 48	24 14.9
2 31	10	55 57	24 31.5
25	10½	56 0	25 3.7
31	11	56 10	24 30.1
8	10	56 15	23 52.1
2 31	9	56 16	24 33.0
25	11	56 25	24 50.2
2	9	56 26	24 39.2
24	9½	4 56 26	+24 14.7

* (4). † M. C. ‡ (4).

Days.	Obs.	Mag.	α.	δ.	Days.	Obs.	Mag.	α.	δ.
			h. m. s.	° ′				h. m. s.	° ′
31		11½	4 56 32	+24 32.0	2	31	9½	4 59 46	+24 41.1
8		10½	56 35	23 52.8	8		10	59 51	23 56.6
25		11	56 44	24 50.7	8		10½	59 53	24 9.1
2	31	12	56 49	24 33.3	8		10	4 59 54	24 8.8
24		11½	56 50	24 26.1	31		10	5 0 1	24 43.0
24		11½	56 54	24 23.1	25		10	0 3	25 5.5
24		10½	56 56	24 11.3	31		11	0 13	24 42.6
25		9	57 0	24 52.9	31		11	0 24	24 42.0
8		9½	57 8	23 52.3	8	24	9½	0 25	24 8.1
24		10	57 7	24 11.3	24		10½	0 25	24 24.9
8		11	57 35	23 55.3	25		11½	0 29	25 1.4
31		10	57 37	24 29.9	25		12	0 29	25 7.4
25		11½	57 38	25 4.2	8	24	9½	0 31	24 7.0
25		10½	57 44	25 4.9	25		12	0 31	25 5.5
24		10	57 54	24 13.3	24		11½	0 34	24 25.0
8		10	57 55	24 7.7	25		10½	0 49	25 5.6
2	31	9½	58 3	24 42.1*	8		10	1 19	23 51.6
2	31	9½	58 7	24 32.1	8		10	1 23	23 58.0
24		11	58 15	24 11.2	2	31	10½	1 27	24 33.9
25		10	58 15	25 5.8	24		11½	1 27	24 9.2
31		11½	58 24	24 42.5	2	31	11	1 33	24 32.9
8		10	58 25	23 59.6	25		12	1 35	24 51.6
8		9	58 40	23 53.6	31		9	1 39	24 40.6
24		11	58 46	24 10.6	24		9	1 43	24 12.6
2		11½	58 58	24 36.0	31		11	1 46	24 40.4
2		11½	58 58	24 35.4	2		11	2 4	24 36.8
25		10½	59 5	25 5.3	24		11½	2 7	24 10.8
25		10½	59 5	24 51.5	24		9	2 10	24 13.0
24		10	59 10	24 14.4	24		9½	2 12	24 15.3
25		10	59 11	25 5.4	8		9½	2 16	24 5.6
2		11	59 13	24 39.0	8		11	2 17	24 3.7
2	31	10	59 15	24 42.0	25		9½	2 21	24 49.7
31		10½	59 21	24 43.3	25		9½	2 27	25 0.9†
25		9½	59 22	24 52.5	8		11½	2 39	24 6.3
24		10½	4 59 29	+24 21 0	2		11	5 2 41	+24 33.8

* M. C.

† (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	°			h. m. s.	° ′
31	10	5 2 50	+24 43.0	24	12	5 7 52	+24 9.3
8	10½	2 51	24 6.4	24	12	7 54	24 13.6
24	12	2 59	24 27.4	31	9½	7 54	24 30.4
24	12	3 9	24 26.2	24	11	7 56	24 14.8
25	9½	3 10	25 7.7	31	9	8 7	24 34.2
24	12	3 14	24 26.8	2	11	8 10	24 44.9
25	9½	3 21	25 0.9	31	10½	8 22	24 35.2§
2	11	3 37	24 32.4:	24	10½	8 29	24 14.0
2	11	3 38	24 36.9	24	12	8 33	24 15.4
2	11	3 47	24 38.5:	25	10	8 35	24 56.3
2	11	3 48	24 46.2	25	9	8 45	24 53.8
25	11	3 58	24 52.1	25	10	8 47	25 1.6
31	11	4 19	24 39.9	25	11	9 5	24 58.0
25	9	4 27	25 5.4	25	10	9 7	24 58.5
25	9½	4 28	24 57.3*	24 31	9½	9 10	24 29.4
31	11½	4 34	24 41.5	31	10½	9 23	24 30.5
24	11	4 37	24 28.1	31	10	9 48	24 34.1
2	11	4 43	24 46.4:	31	10	9 51	24 35.9
24	9½	4 49	24 26.0	24	11	10 0	24 12.5
24	11	5 19	24 10.3:	24	10	10 2	24 17.6
2	11	5 35	24 43.0	24	11	10 3	24 11.0
31	10½	5 45	24 32.1	24	11½	10 14	24 17.1
31	10½	5 45	24 29.5	2 31	9	10 17	24 29.2
31	10½	5 47	24 33.1	24	11½	10 28	24 19.0
24	9½	5 49	24 20.7*	25	10½	10 51	24 54.9
2	9½	6 4	24 47.2†	24	9	10 58	24 17.7
24	9	6 10	24 20.4‡	31	11	11 25	24 39.3
31	10	6 12	24 34.4	31	10½	11 34	24 33.1
2	11½	6 17	24 49.1	31	11	11 46	24 38.4
24	10	6 30	24 19.9‡	31	11	11 49	24 27.6
31	11	6 41	24 29.9	25	11½	11 53	24 54.0
31	10	7 16	24 34.1	25	11½	12 9	24 57.7
2	11½	7 28	24 44.5	24	10	12 10	24 27.1
25	11	7 44	24 47.1	24	9½	12 16	24 20.0‖
25	9	5 7 46	+24 56.8	25	11½	5 12 23	+24 55.9

* (4). † M. C. ‡ (4). § N. of double. ‖ (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
24 31	11	5 12 50	+24 27.5	25	9½	5 18 12	+25 2.4
24	9½	13 0	24 22.9	25	11	18 26	24 54.8:
31	12	13 3	24 32.6	24	9	18 33	24 12.0
31	11	13 15	24 29.9	25	11½	18 42	24 53.3
25	11	13 27	24 55.7	24	9½	18 50	24 11.0
25	12	13 40	24 52.5	31	9½	19 25	24 30.0
25	12	13 47	24 56.0	31	10½	19 35	24 30.5
24	11½	14 11	24 14.8	24	10	19 51	24 22.0
31	11	14 11	24 45.8	31	9½	19 59	24 30.9
25	11½	14 16	24 57.4	24	12	20 1	24 22.4
31	12	14 18	24 42.3	25	11	20 13	25 1.1
24	9½	14 34	24 18.3*	31	11½	20 16	24 44.1
24	11½	14 42	24 23.9	24	9½	20 34	24 17.8*
24	10½	14 45	24 24.8	31	11	20 38	24 28.0
25	9½	15 10	25 5.5	31	10	20 58	24 30.0
31	11½	15 19	24 42.1	24	10½	21 3	24 13.0
31	11½	15 28	24 41.7	25	10½	21 4	25 0.9
24	10	15 37	24 7.9	25	10	21 4	25 3.9
25	11	15 42	25 7.0	3	10½	21 21	22 37.6
25	11½	15 48	25 1.8	31	8½	21 24	24 41.7
25	11½	16 0	25 6.4	25	10½	21 28	24 51.0
24	9½	16 12	24 12.5	25	10½	21 29	24 54.1
31	10½	16 16	24 29.6	3	9½	21 33	22 48.5
31	11	16 23	24 29.5	24	10½	21 35	24 18.4
24	10	16 40	24 9.6	31	11½	21 43	24 31.0
25	9	16 48	25 6.8	3	11	21 44	22 48.6
25	11	16 53	25 4.4	24	11	21 55	24 27.8
24	9½	16 58	24 17.5	31	10	21 57	24 30.3
24	12	17 6	24 10.8	2	11½	22 14	24 33.1
31	11	17 12	24 31.4	25	11	22 28	24 51.3
31	10½	17 14	24 29.1	3	10	22 32	22 37.4
31	10½	17 27	24 28.1	31	10	22 34	24 32.9
24	11	17 54	24 27.4	25	11	22 43	24 56.9
24 31	11	18 3	24 27.7	25	9½	22 47	24 52.6
24	10	5 18 5	+24 25.5	3	10	5 22 56	+22 37.7

*(4).

Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′
24	11	5 22 59	+24 14.5
24	10½	23 5	24 15.3
31	10	23 5	24 34.2
31	10	23 9	24 41.7
3	9½	23 13	22 42.8*
31	9½	23 17	24 43.1
25	11½	23 19	24 53.6
24	12	23 22	24 16.8
24	12	23 23	24 13.2
2	11	23 34	24 44.9
2	10½	23 41	24 36.0
3	10	23 50	22 49.8
25	9½	24 5	25 4.7
2	9½	24 6	24 37.4
2	10	24 21	24 35.5
25	10	24 32	25 4.2
25	11	24 34	24 51.0
2 31	9½	24 35	24 33.4
31	10	24 35	24 30.0
25	10	24 36	24 55.2:
24	11½	24 40	24 12.3
3	9½	24 43	22 38.0
31	11	24 47	24 29.7
3	10½	25 9	22 44.9
2	9½	25 11	24 48.9
24	9½	25 14	24 14.9
3	9½	25 16	22 45.5
31	10½	25 24	24 38.1
2 31	10	25 32	24 44.4
25	9½	25 40	25 2.1
24	9½	25 45	24 21.2
24	9	25 51	24 22.7
3	10	25 53	22 39.8
25	12	25 53	25 2.6
31	10	5 25 53	+24 30.6

Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′
25	10	5 26 1	+25 4.3
3	11	26 3	22 38.1
25	9	26 10	24 55.0
31	11	26 10	24 29.1
3	12	26 25	22 37.8
3	11	26 34	22 46.8
2	9	26 37	24 49.3
25	9½	26 39	24 57.7
2	11	26 44	24 36.6
2	11½	26 52	24 48.5
24	9½	26 53	24 25.2
24	9½	26 58	24 26.2
25	10	27 11	24 53.0
31	10	27 12	24 41.9
24	10	27 20	24 24.1
2 31	11	27 25	24 40.7
3	9	27 25	22 47.8
31	10	27 30	24 38.1
2 31	11	27 36	24 39.7
2 31	10	27 40	24 40.8
24	9	29 47	24 28.1
3	10½	27 49	22 44.0
24	10½	27 54	24 24.0
25	9	28 2	24 52.5
31	9½	28 4	24 39.0
3	10½	28 8	22 37.8
3	11	28 12	22 40.0
25	11	28 13	24 52.1
25	9½	28 16	24 59.4
24	11	28 34	24 13.8†
3	11	28 36	22 39.3
25	11	28 46	24 50.5
24	9½	28 57	24 13.0
24	11	29 3	24 14.6
25	9½	5 29 15	+24 53.9

* (4). † N. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
25	9½	5 29 19	+24 54.5*	2	11½	5 33 16	+24 47.9
2	11	29 37	24 48.9	2	12½	33 27	24 48.3
24	9½	29 37	24 11.9	2	12	33 35	24 47.0
2	11	29 39	24 47.1	24	10	33 40	24 9.7
31	11½	29 40	24 41.2†	24	12	33 44	24 13.4‖
2 31	10	29 41	24 44.4	24	11½	33 58	24 13.2
2	11	29 45	24 48.4	3	9½	34 2	22 50.4
3	12	29 45	22 47.5	25	9½	34 4	25 6.3
25	9½	29 46	24 55.1	3	11½	34 8	22 40.5
3	12	29 48	22 50.2	25	9½	34 9	25 6.5
25	10	29 50	24 53.9	2	11	34 20	24 37.8¶
31	11	29 51	24 44.5	25	9½	34 35	25 2.4
24	9½	29 52	24 17.2	3	10	34 42	22 35.5
24	10	30 0	24 8.1	25	9	34 44	25 7.2
3	10	30 0	22 34.6	2	9	34 48	24 36.9
24	10	30 20	24 8.1	3	10	34 50	22 38.3
3	9½	30 26	22 33.8	2	9	34 54	24 34.7
2	10	30 37	24 31.9	3	10	35 4	22 47.1**
25	11	30 50	25 3.5	25	10	35 15	25 5.0
3	10	30 53	22 35.2	24	11	35 18	24 15.9
2	10	30 58	24 28.3	3	9½	35 19	22 51.0
25	11½	31 1	24 52.9	24	10½	35 34	24 14.6
2	10½	31 25	24 35.9	2	10	36 12	24 38.0
24	11½	31 30	24 12.7	2	8½	36 18	24 43.8
2	10½	31 38	24 47.5	2	11	36 21	24 33.1
3	–	31 46	22 41.0	3	11	36 21	22 48.8
2	10	31 54	24 47.0	3	10½	36 25	22 44.6
3	9½	32 5	22 34.6	2	9	36 30	24 37.8
24	11	32 7	24 16.9	3	11	36 32	22 49.8
24	10½	32 7	24 10.8	25	12	36 32	24 54.7
3	9	32 8	22 39.2‡	3	10	36 34	22 47.4
2	12	32 26	24 45.7§	25	10½	36 41	24 54.2
2 25	11	32 37	24 50.1	25	10½	36 47	24 55.1
25	10	32 42	24 52.9	2	11	37 20	24 31.9
25	9½	5 33 5	+25 1.8	24	11	5 37 37	+24 27.3

* Red. † N. of double. ‡ (4). § S. *f.* of double.
‖ S. *p.* of double. ¶ Double. ** *f.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
24	11	5 37 39	+24 27.2	3	10	5 42 49	+22 34.3
25	11½	37 53	25 2.6	2	10½	42 58	24 37.0
3	10½	38 1	22 48.0	3	10½	43 33	22 37.6
25	11	38 7	25 2.8	25	9½	43 40	24 55.5
25	9	38 11	24 52.0	3	11	43 45	22 36.8
2	12	38 17	24 35.8	2	10½	43 49	24 32.1
25	11½	38 22	25 2.0	2	10	43 49	24 39.9
25	9½	28 30	24 54.0	3	11	43 50	22 37.5
3	9	38 39	22 44.8	2	10	43 52	24 33.4
25	9½	38 39	24 54.4	25	9½	43 54	25 56.1
3	9	38 44	22 51.6	3	10	43 56	22 36.2
3	11	39 3	22 33.1	3	11½	44 0	22 36.8
2	10	39 19	24 54.4	25	11½	44 2	24 56.8
25	11	39 53	25 3.8	25	11½	44 28	24 53.9
25	11	39 55	25 4.0	2	11½	44 29	24 34.9
25	10	39 57	25 0.9	25	12	44 33	24 56.8
3	12	40 3	22 39.2	3	10	45 10	22 46.3
3	11	40 6	22 38.6	3	12	45 15	22 47.3
2	10	40 15	24 46.8	3	9	45 23	22 48.1
25	11	40 15	25 3.1	2	10	45 26	24 37.5
2	11	40 21	24 46.6	25	9	45 30	25 5.8
2	12	40 34	24 46.5	25	9	45 31	24 50.9
25	9½	40 48	25 0.1	2	10½	45 45	24 32.9
25	11	41 30	25 1.3	25	9½	45 48	24 52.9
2	10½	41 31	24 45.4	3	10	45 58	22 33.9
2	11½	41 32	24 44.7	3	9½	46 12	22 35.2
25	11	41 36	25 2.0	2	10	46 34	24 45.0
25	10½	41 48	25 0.6	3	10½	47 3	22 39.3
2	10½	41 59	24 35.7	25	10½	47 16	25 4.1
3	10	42 0	22 34.9	3	12	47 22	22 45.4
25	10½	42 0	25 0.1	3	11	47 25	22 46.0
25	10½	42 0	25 2.1	2	10½	47 32	24 33.5
3	10	42 7	22 32.5	25	11	47 32	25 4.8
3	10½	42 26	22 38.6	25	9½	48 5	24 58.5
25	9½	5 42 26	+25 1.7	3	10	5 48 51	+22 47.8

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
3	10	5 48 52	+22 50.4	31	10	5 54 21	+25 17.4
3	9	48 52	22 51.0	3	10½	54 30	22 34.5†
2	11½	48 55	24 35.1	3	10½	54 37	22 33.9
25	11½	49 44	24 54.8	25	9½	54 38	25 6.3
2	12	49 50	24 47.5	31	9½	54 45	25 16.3
25	11½	49 57	24 56.8	31	10	54 51	25 17.5
25	9½	50 9	24 56.9	3	11	55 3	22 32.3
3	11½	50 15	22 45.3	31	9½	55 9	25 10.8
3	10	50 16	22 44.8	31	10	55 17	25 14.7
3	10	50 23	22 33.7	3	11½	55 28	22 34.3
3	10½	50 25	22 33.7	25	9½	55 46	24 53.1
25	11	50 46	24 50.9	3	12	56 5	22 48.9
25	11	51 8	24 50.0	25	10½	56 21	24 55.1
31	10½	51 21	25 10.0	31	9½	56 21	25 11.1
25	10	51 41	25 7.8	25	10½	56 28	24 51.9
3	11	51 48	22 39.4*	31	11	56 35	25 16.7
25	9½	51 52	25 4.3	3	10	56 39	22 38.2
25	10½	51 52	25 7.9	25	9½	56 48	24 58.7
31	10½	51 52	25 16.7	3	10	56 52	22 39.7
3	10	51 57	22 39.2*	31	11	56 54	25 12.2
3	11½	51 59	22 37.6	3	10	56 56	22 49.1
31	10½	52 22	25 11.4	25	10½	57 47	25 2.9
31	10	52 26	25 18.6	31	10	57 53	25 12.0
25	9½	52 51	24 50.2	31	10½	58 1	25 16.7
31	9½	52 53	25 11.8	25	9½	58 3	25 6.1
3	9	53 6	22 32.4	25	9½	58 15	24 53.8
25	11	53 6	24 53.3	31	10	58 17	25 13.3
31	11	53 6	25 11.4	25	9½	58 20	24 52.9
3	10	53 27	22 37.8	31	9½	58 27	25 12.8
3	10	53 31	22 34.9	3	11	58 51	22 37.1
25	11	53 42	24 54.8	31	9½	58 56	25 11.4
31	10½	53 47	25 28.7	25	9	58 57	24 55.1
25	9½	53 48	24 50.8	25	10	58 57	24 50.2
31	9½	54 7	25 28.9	3	12	59 4	22 36.1
3	11	5 54 17	+22 33.4	3	11½	5 59 8	+22 33.3

* (4). † S. *f.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
31	9	5 59 13	+25 12.0	3	11	6 3 50	+22 35.1
31	9½	59 41	25 28.2	25	9½	3 54	25 5.0
25	10	59 48	24 51.8	3	10	3 58	22 49.3
25	11	59 50	24 50.7	25	10	4 5	25 6.4
31	10	59 52	25 23.4	31	10	4 10	25 13.7
25	9½	5 59 53	25 0.2	31	11	4 19	25 14.3
3	9	6 0 5	22 34.8	31	9½	4 22	25 13.8
31	10½	0 6	25 24.1	3	10	4 27	22 51.2
3	12	0 11	22 36.9	25	10½	4 31	24 51.1
3	9	0 23	22 37.7	3	12	4 39	22 49.9
25	9½	0 42	24 56.8	25	11½	4 44	24 51.9
25	9½	0 46	24 55.8	25	11	4 51	24 53.7
3	9	0 48	22 40.3	31	9½	4 53	25 13.9
31	10	0 55	25 23.6	3	8½	5 9	22 50.1
25	9½	0 57	25 4.0	31	9	5 9	25 25.6
3	11	0 59	22 35.0	31	9½	5 21	25 26.0
31	10	1 0	25 25.1	31	11½	5 29	25 27.5
25	9½	1 1	25 2.8	25	10½	5 41	24 54.3
31	10	1 19	25 22.8	25	10	5 51	24 54.5
31	11	1 22	25 23.4	25	9	5 52	25 7.2
25	9½	1 25	24 57.7	25	10	6 3	24 52.1
3	9½	1 30	22 36.4	31	11½	6 33	25 15.7
31	10	1 33	25 22.7	25	10½	6 38	24 50.8
25	8	2 20	25 2.0	31	11½	6 49	25 12.4
3	11½	2 21	22 36.8	31	9½	7 2	25 13.6
31	10	2 24	25 28.6	25	9½	7 5	24 50.0
3	9	2 26	22 32.6	31	10	7 17	25 16.0
25	9½	2 33	25 6.2	3	10	7 36	22 47.2
31	9½	2 34	25 25.8	31	10½	7 51	25 26.3
25	9½	2 46	24 53.8	25	11½	7 57	25 7.1
3	9	2 47	22 39.8	25	10	7 59	25 5.6
25	9½	2 52	24 53.6	25	12	8 1	25 3.5
31	9	2 57	25 15.6	31	10½	8 5	25 23.3
31	10½	3 8	25 23.1	25	10	8 10	25 5.4
31	11	6 3 11	+25 23.3	3	11½	6 8 11	+22 45.0

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
3	9	6 8 24	+22 48.5	31	10½	6 13 49	+25 25.9
3	9	8 35	22 46.3	31	9½	13 52	25 23.7
31	10	8 42	25 15.4	25	10½	13 54	24 53.2
25	10	8 55	25 8.2	31	9½	13 54	25 26.9
25	11	8 59	25 7.7	25	10	13 55	24 50.8
31	11	9 18	25 24.4	25	9½	14 21	24 50.7
31	10	9 18	25 27.8	3	12	14 25	22 32.8
3	8	9 27	22 44.0	25	10	14 47	25 6.1
3	10½	9 27	22 50.5	31	11	15 3	25 28.2
25	9½	10 9	25 5.5	3	11½	15 7	22 35.2*
3	11½	10 19	22 30.5	3	11½	15 23	22 37.4
25	10	10 22	25 2.7	31	11	15 30	25 25.2
31	11	10 22	25 28.3	25	10	15 47	25 4.9
25	10½	10 33	25 7.3	25	11	16 5	24 51.7*
31	9½	10 33	25 28.2	31	10	16 24	25 21.0
25	8	10 37	25 4.2	3	12	16 29	22 34.7
3	–	10 38	22 53.9:	31	9½	16 38	25 26.8
31	10	10 39	25 21.6	3	8½	16 46	22 38.0
3	9	10 50	22 53.8	25	9	16 46	24 55.4
3	9	11 3	22 54.7	31	10½	16 47	25 21.7
31	9½	11 17	25 14.7	25	10	16 49	24 54.3
3	8	11 19	22 48.7	25	11	17 3	25 5.7
31	10	11 45	25 25.9	25	9	17 37	24 49.8
25	11	11 56	24 57.2	31	10	18 8	25 13.5
31	10	12 1	25 10.7	3	12	18 16	22 38.5
25	10	12 4	24 56.6	31	10	18 22	25 25.5
25	10	12 17	25 3.0	3	10½	18 25	22 39.2
3	9½	12 21	22 47.2	3	9	18 33	22 33.8
3	11	12 36	22 37.7	31	10½	18 41	25 11.8
31	10	12 36	25 14.4	3	11	18 46	22 40.4
31	11	12 47	25 14.7	3	10½	19 22	22 50.4
3	9	12 50	22 39.3	31	10	19 23	25 24.9
25	9½	13 2	25 2.2	31	10	19 25	25 16.5
31	9	13 6	25 17.4	31	9	19 28	25 12.5
31	10	6 13 26	+25 21.2	3	10	6 19 36	+22 46.0†

* N. of double.

† L. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
31	9½	6 19 45	+25 12.4	31	10	6 28 36	+25 23.5
3	10½	19 56	22 49.2	31	9½	28 48	25 11.9
3	10½	20 21	22 43.8	31	9½	28 51	25 14.8
31	9	20 34	25 31.5	3	11	28 54	22 48.5
3	10½	20 57	22 46.0	3	11½	29 27	22 45.9
3	11	20 57	22 47.0	2	11	29 33	22 8.2†
3	10½	21 5	22 51.4	3	12	29 45	22 47.6‡
31	10	21 24	25 26.9	3	11	29 45	22 50.6
31	10	21 28	25 23.1	2	11	30 4	22 4.2
3	10	22 2	22 32.4	31	10	30 6	25 14.9
31	9½	22 19	25 13.4	31	9	30 11	25 11.9
31	11½	22 38	25 14.6	3	11	30 37	22 36.4
3	10	22 47	22 49.9	31	10	30 41	25 16.5
3	11	22 52	22 48.1	3	11	30 46	22 36.2
31	11	22 52	25 16.1	2	11	30 51	22 5.4
3	11½	22 55	22 49.9	31	10	31 32	25 15.3
31	10	22 57	25 17.5	2	11	31 51	21 55.0
31	10	23 3	25 16.8	3	9½	31 56	22 47.1
3	11½	24 3	22 36.5	3	10½	32 3	22 44.2
3	11½	24 12	22 35.1	2	10½	32 16	21 56.0
31	11	24 15	25 24.7	3	11	32 26	22 42.9
31	9	24 38	25 25.3	31	10	32 39	25 18.9
31	9½	24 45	25 18.6*	31	11½	32 39	25 11.4
31	9½	25 19	25 20.5*	31	11	32 40	25 15.9
3	11	25 38	22 51.6	2	9½	32 56	22 4.5
3	10½	25 39	22 44.0	2	9½	33 38	22 1.8
3	11½	25 42	22 44.8	2	10	33 41	22 12.6
3	11½	26 23	22 38.3	3	11½	33 55	22 34.5
3	9	26 50	22 34.1	3	10½	34 13	22 48.6
3	12	27 33	22 33.0	31	10	34 35	25 23.5
3	9	27 41	22 46.3	31	10	34 36	25 20.6
3	10	27 53	22 33.9	2	9	34 38	21 59.1
3	9	28 5	22 33.2	31	10	34 38	25 22.3
31	10	28 32	25 24.6	2	11	34 49	22 2.1
3	10½	6 28 36	+22 51.2	2	11	6 34 56	+22 4.8

* (4). † N. of double. ‡ N. *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
2	10	6 35 2	+21 55.7	24	9½	6 38 46	+21 33.2
2	9	35 22	21 58.6	22	9½	38 53	21 15.3
24	10	35 24	21 38.2*	22	11	38 54	21 13.9
24	10	35 29	21 43.1†	2	10½	39 1	21 56.4
3	9	35 53	22 50.1	31	10	39 1	25 22.2
3	10	35 57	22 49.0	22	11	39 9	21 16.1
31	10	35 57	25 27.2	31	10	39 11	25 23.4
31	10	35 59	25 26.6	31	9½	39 16	25 23.1
31	10	36 1	25 22.4	31	10	39 42	25 18.7*
22	10	36 3	21 11.1	3	10	39 55	22 34.9
2	9	36 17	21 53.3	22	10	39 57	21 13.4
3	9½	36 17	22 49.2	31	10½	40 0	25 18.2*
22	12	36 17	21 20.4	2	11	40 2	21 56.1
22	9½	36 20	21 12.5	2	10	40 10	22 9.9
2	9½	36 26	21 57.9	22	11½	40 10	21 12.7
22	9½	36 34	21 15.1	2	12	40 20	21 57.2
31	9½	36 54	25 24.2	2	11	40 33	21 56.7
31	10	36 59	25 25.7	22	10½	40 35	21 22.8
2	10½	37 6	21 56.5	22 24	9½	40 45	21 26.9
31	10½	37 13	25 24.6	24	11	41 14	21 43.5
2	10	37 17	21 57.7	31	10	41 27	25 23.9
24	10½	37 17	21 36.2*	22	9	41 33	21 24.7:
2	10½	37 23	21 54.9	2	11	41 38	21 58.6
31	11	37 25	25 26.4	2	9½	41 46	21 57.3
22	11	37 27	21 22.4	31	9½	41 48	25 25.6
3	9	37 28	22 51.1	22	10	41 55	21 17.0
22	12	37 37	21 22.8	2	11½	41 57	21 57.0
22	9	37 44	21 10.5	24	10½	42 12	21 43.4
31	10	37 51	25 25.4	24	10	42 14	21 43.5
2	9	38 19	21 53.9	2	11½	42 16	21 55.6
22	10	38 33	21 13.2	2	11½	42 22	21 55.6
2	10	38 35	22 2.9	24	10½	42 26	21 44.3
2	11	38 39	21 56.3	22	9	42 48	21 21.0
3	10	38 45	22 33.2	22	11½	42 57	21 21.4
22	12	6 38 45	+21 15.3	24	11	6 43 16	+21 46.6

* (4). † Double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
2	11	6 43 21	+21 55·7	2	11½	6 49 42	+21 54.6
2	11	43 28	21 56.8	24	10	49 42	21 44.9
2	11	43 35	21 58.1	2	11½	49 44	21 55.5
22	10½	43 41	21 24.6	24	9½	49 53	21 48.9
24	10	44 8	21 43·3	2	10	49 59	21 52.9
2	10	44 10	22 0.4*	22	11½	50 23	21 24.4
2	11	44 19	21 54.7	2	10	50 32	22 10.6
22	11	44 52	21 20.1	24	11	50 46	21 34.8
22	11	44 53	21 20.6	22	11	50 47	21 20.3*
22	11½	45 13	21 10.6	2	10½	51 6	22 2.0
2	11	45 30	21 54.6	2	10½	51 7	22 1.9
2	11	45 33	21 54.1	2	10½	51 11	21 54.4
2	9	45 37	22 8.7	2	10	51 17	22 2.2
24	10½	46 1	21 40.9	2	10½	51 19	21 54.4
24	10½	46 3	21 40.3	24	10½	51 19	21 32.3
2	9	46 36	21 54.3	22	9	51 31	21 27.0
2	11	46 37	21 57.1	24	11	51 33	21 32.4
22	11	46 41	21 10.8	22	10	52 18	21 23.8
22	11	46 45	21 14.4	22	11	52 33	21 28.7
22	11	46 53	21 10.8	24	10	52 46	21 42.9
2	12	46 58	21 56.3	24	11	52 58	21 43.0
22	10½	47 6	21 10.5	22	11	53 16	21 12.6
2	10½	47 20	22 5.5	2	9	53 20	21 58.7
2	11	47 22	21 52.8	22	11½	53 41	21 14.7
24	10	47 26	21 48.7	22	10½	53 49	21 15.1
24	10	47 38	21 39.1	2	11½	54 4	21 56.4
22	11½	47 50	21 27.3	24	10	54 4	21 35.3
22	9½	47 57	21 22.0	24	10	54 14	21 38.2*
24	10	48 0	21 44.7	2	9½	54 17	21 55.7
22	9	48 23	21 23.9	22	12	54 18	21 24.1
2	9	48 25	21 59.3	2	11	54 30	21 53.4
24	10½	48 34	21 45.4	2	11½	55 3	21 53.2
2	11½	48 36	21 59.8	22	10	55 4	21 11.3
2	9½	48 42	22 5.3	2	11	55 8	21 52.9
2	9½	6 48 53	+22 6.7	22	9	6 55 22	+21 15.0

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
22	9½	6 55 45	+21 9.7	2	11½	7 2 13	+21 53.2
24	10½	55 47	21 42.6	22	12	2 22	21 25.7
22	9	55 55	21 16.2	22	9	2 27	21 26.8
2	10½	55 57	21 58.1	2	8	2 37	21 58.6
24	10	55 57	21 27.0	22	10½	2 42	21 12.4
2	9	56 6	21 59.4	2	12	2 45	22 10.3
2	11	56 10	22 5.2	22	10	3 28	21 13.0
2	11½	56 12	22 9.0	22	10	3 29	21 13.3
24	11	56 38	21 31.9	2	11½	3 35	22 10.2
22	9	56 40	21 22.4	2	11	3 50	22 2.4
24	10	56 49	21 42.7	22	10½	4 13	21 10.4
22	11½	56 51	21 27.4	22	10	4 19	21 9.7
2	11	57 20	22 5.7	2	11	4 37	21 53.4
24	10	57 21	21 34.0	2	11	4 37	22 9.9
22	11	57 35	21 12.0	22	10	4 54	21 24.9
2	9	57 41	22 6.3	2	11½	5 20	21 53.3
22	10	57 56	21 2.8	2	11	5 26	21 52.7
22	10	58 3	21 12.5	22	9½	5 42	21 11.1
2	10	58 5	21 52.2	22	10½	5 48	21 27.6
24	10	58 10	21 41.1	22	10	6 19	21 15.1
2	10	58 23	21 52.5	2	11½	6 20	21 58.0
24	10	58 27	21 42.6	22	10	6 28	21 12.7
22	9½	58 28	21 22.8	2	12	6 29	21 54.7
22	9	58 59	21 27.3	2	10	6 31	21 52.2
22	9½	59 12	21 25.7	22	11	6 54	21 14.2†
2	8	59 15	22 8.9	22	11	7 0	21 15.3
24	10	59 24	21 28.4	2	11	7 37	22 9.6
2	10½	6 59 59	22 9.7	2	10	7 53	22 0.5‡
24	10½	7 0 13	21 40.9*	2	9	7 53	22 9.7
22	10½	0 25	21 10.1	22	10	8 8	21 14.7
22	9	0 50	21 27.5	22	10½	8 24	21 17.4
22	10½	1 14	21 26.3	22	11	8 43	21 17.9‡
22	10	1 28	21 12.0	22	10	8 52	21 14.1
22	10	1 33	21 12.3	2	10	9 16	22 9.1
2	10	7 2 3	+21 54.1	22	11	7 10 5	+21 13.9

* *p.* by a small star. † N. *f.* of double. ‡ (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
2	9½	7 10 7	+21 52.0	24	10	8 8 53	+22 39.4†
22	11	10 19	21 16.8	24	10	8 59	22 35.3
22	11½	11 52	21 13.2	24	8	9 37	22 40.9†
22	12	12 8	21 13.4	24	11	10 3	22 48.8
22	11½	12 14	21 12.9*	24	11	10 55	22 47.5
22	10½	13 3	21 25.0	24	11	11 22	22 51.4
22	9	13 5	21 25.0	24	10½	11 57	22 36.2
22	9	13 25	21 12.3	24	11	12 35	22 35.2
22	11	13 47	21 15.8	24	11	12 52	22 33.5
22	10½	14 6	21 16.1	24	9	13 15	22 34.7
22	10	14 27	21 17.5	24	12	14 47	22 34.5
22	11	14 37	21 17.5	24	9½	14 52	22 34.1
22	10	14 38	21 14.4	24	11	16 37	22 40.9
22	10	14 53	21 14.9	24	10	16 38	22 48.2
22	12	15 50	21 12.7	24	10½	16 45	22 37.4
22	12	16 24	21 10.0	24	10	17 16	22 47.2
22	11½	17 30	21 12.9	24	11½	18 41	22 37.8
22	8	18 4	21 19.6†	24	11½	18 54	22 36.3
22	9	20 17	21 12.8	24	9	19 11	22 35.5
24	10½	59 11	22 37.4	24	9	19 31	22 43.5
24	11	7 59 51	22 44.0	24	10	20 28	22 30.9
24	9	8 0 5	22 43.1	24	11	20 54	22 47.8
24	10½	1 6	22 29.0	24	8	21 10	22 31.4
24	9	1 48	22 35.4	24	11	22 29	22 45.1
24	10	1 51	22 43.5	24	11	22 35	22 32.8
24	11	2 3	22 36.0	24	11	23 32	22 30.7
24	9	2 20	22 34.8	24	10½	24 59	22 37.6
24	11½	3 4	22 47.3	24	11	25 32	22 44.1
24	10½	3 36	22 42.5	24	10½	26 12	22 35.3
24	9½	4 50	22 36.3	24	9½	26 14	22 42.4
24	10	4 54	22 33.7	24	12	27 55	22 46.5
24	10½	5 3	22 47.6	24	10½	29 15	22 45.7
24	10½	6 51	22 36.1	24	11	29 21	22 46.8
24	9½	7 11	22 38.9	24	11	29 44	22 46.9
24	9	8 8 45	+22 45.8	24	10½	8 30 11	+22 40.9

* N. *f* of double. † (4).

NOTES.—2nd—Between α. 4h. 49m. and 5h. 11m., object-glass covered with frost.

8th—Between α. 2h. 58m. and 3h. 44m., on examining the object-glass, found it covered with frost.

" Between α. 4h. 20m. and 5h. 3m., object-glass covered with frost; magnitudes very uncertain.

APPROXIMATE MEAN PLACES, FOR JANUARY 1, 1850,

OF

886 STARS NEAR THE ECLIPTIC,

OBSERVED IN FEBRUARY, 1851, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
1	10½	4 40 15	+25 12.4	1	11½	4 54 13	+25 23.1
1	11½	40 37	25 15.4	1	11	55 7	25 28.5
1	12	41 46	25 15.2	1	10	55 53	25 23.5::
1	9	42 0	25 21.6*	1	10	55 57	25 27.8
1	11½	43 22	25 13.9	1	10	55 58	25 25.1
1	11½	43 37	25 16.0	1	11	56 23	25 24.7
1	11½	43 58	25 15.9	1	10	56 53	25 26.7
1	11	44 19	25 17.3	1	10	57 24	25 18.7
1	11½	44 23	25 11.8	1	10	57 40	25 17.0
1	11	45 18	25 24.7	1	11	57 54	25 17.3
1	11	45 29	25 17.4	1	10	58 4	25 19.3
1	11	45 30	25 27.2	1	10	58 30	25 23.2
1	8½	45 30	25 28.8	1	10	59 54	25 14.1
1	10	46 21	25 14.5	1	9½	4 59 59	25 19.9*
1	9½	46 39	25 24.3	1	11½	5 0 3	25 14.5
1	10½	47 56	25 22.3	1	11½	0 26	25 17.3
1	11½	48 9	25 13.3	1	11	1 53	25 18.0
1	9	48 22	25 29.8::	1	11	2 4	25 18.9
1	11½	48 28	25 15.4	1	10	2 8	25 25.6
1	10	49 36	25 25.5	1	10	2 34	25 20.7
1	11½	50 18	25 17.8	1	10½	2 39	25 15.9
1	11	50 28	25 17.4†	1	11	3 3	25 13.5
1	9½	50 31	25 15.8	1	12	3 59	25 14.8
1	11½	51 3	25 17.3	1	10	4 18	25 18.1
1	10	51 19	25 30.1	1	9½	4 41	25 8.5
1	10	52 10	25 28.0	1	9½	4 46	25 21.7
1	9½	52 31	25 22.0	1	11	5 15	25 12.0
1	11	52 47	25 25.0	1	10½	5 37	25 14.6
1	9½	53 38	25 29.4	1	11½	6 0	25 27.3
1	10½	4 53 43	+25 28.1	1	9	5 7 7	+25 13.6

* (4).

† N. *f.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
1	10	5 7 15	+25 18.4	1	10	5 24 2	+25 28.3
1	11	7 39	25 11.8*	1	10	24 7	25 23.9
1	11½	8 35	25 18.4	1	9	24 54	25 28.7
1	11½	8 42	25 17.5	1	10	24 56	25 30.5
1	10	8 58	25 17.3	1	10½	25 29	25 13.0
1	10	9 8	25 20.2	1	11	25 33	25 15.0
1	10	9 37	25 22.5†	1	10	25 44	25 16.0
1	11	10 5	25 26.7	1	9	26 30	25 28.0
1	10½	10 20	25 28.0	1	10	26 41	25 22.3‡
1	11½	11 8	25 30.0	1	9½	26 59	25 25.3
1	11	11 16	25 25.0	1	9½	27 20	25 23.2
1	10½	11 22	25 28.5	1	9½	27 26	25 26.3
1	10	11 26	25 24.6	21	10½	27 33	23 56.0
1	11½	12 24	25 15.5	21	11½	27 35	23 54.7
1	11½	12 31	25 15.4	21	10½	27 35	23 50.2
1	10½	12 44	25 25.6	1	10	27 58	25 26.8
1	10½	12 57	25 23.8	21	10	28 24	23 49.5
1	11	13 5	25 25.3	1	10	28 39	25 18.5
1	10	14 43	25 31.8	1	10	28 40	25 14.0
1	10	14 46	25 22.2†	21	10	28 43	24 6.0
1	12	17 4	25 16.8	21	9	28 45	24 7.5
1	12	17 7	25 15.9	21	10	29 15	23 51.3
1	10	17 15	25 11.5	1	10½	29 19	25 17.8
1	11	18 8	25 16.0	21	11½	29 32	23 51.4
1	10½	18 12	25 28.5	1	9	29 56	25 28.0
1	10	18 18	25 20.7	1	9	30 7	25 24.2
1	10	18 38	25 14.5	21	10	30 8	23 55.6
1	10	19 39	25 12.8	1	9½	30 10	25 20.1
1	10	20 13	25 17.2	1	8	30 16	25 13.1
1	10	20 22	25 12.3	21	9½	31 22	23 54.4
1	10	20 50	25 16.8	21	12	31 26	23 50.8
1	10	21 20	25 16.7:	21	9½	31 27	23 53.8
1	9	22 8	25 11.4	1	11	31 49	25 18.4
1	9	23 7	25 14.2	1	11	31 52	25 25.3
1	11	5 23 48	+25 16.1	21	10	5 31 55	+23 54.4

* N. *p.* of double. † (4). ‡ *f.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
1	9	5 32 7	+25 25.7	21	10	5 41 23	+23 52.2
21	10½	32 24	23 54.5	1	11	41 25	25 15.4
1	9	32 35	25 24.1	21	11½	41 26	23 52.5
21	10½	32 31	23 55.2	1	11	41 29	25 16.1
21	12	32 51	23 53.3	21	9½	42 10	23 51.0
1	10	33 19	25 14.0	1	10	42 44	25 15.1
1	9½	33 35	25 13.7	1	10	42 55	25 18.5
21	10	34 12	24 2.8	21	9½	43 6	24 6.9
21	10½	34 14	23 51.4	21	9½	43 8	23 52.4
21	9½	35 3	24 4.9	1	10½	43 32	25 28.3
21	9½	35 8	24 0.5*	1	11	43 59	25 11.9
21	10	35 22	24 7.6	1	11	44 4	25 16.2
1	10	35 24	25 24.8	21	9	44 7	24 2.3
1	10	35 48	25 24.6	21	9½	44 22	24 1.6
1	10	36 1	25 26.9	21	9½	44 32	24 0.4
21	9½	36 16	24 0.7	1	11	45 14	25 27.2
21	9½	36 16	23 50.5	1	11	45 33	25 27.7
1	11	36 35	25 15.7	21	10	46 17	24 0.4
21	10	36 56	23 54.4	1	9	46 29	25 26.2:
21	11	37 9	23 53.2	21	11½	46 34	23 55.7
21	10½	37 21	24 6.3	21	9½	46 39	23 56.3
1	11	38 6	25 24.9	1	9	46 40	25 27.7:
1	11	38 9	25 28.0	21	9½	46 40	24 2.5
21	10	38 22	24 0.6	1	10	46 44	25 22.2
1	10½	38 39	25 15.3†	21	9½	46 53	24 0.6
21	9½	38 39	23 51.5	26	11	47 4	21 7.7
1	10	39 9	25 15.9	26	10	47 18	21 8.5
1	10	39 11	25 18.1	26	10	47 30	21 9.2
21	10	39 35	23 57.2*	26	9½	47 51	21 24.2
1	10	39 42	25 15.9	21	10	47 54	24 7.1
1	11	39 51	25 15.5	21	11½	47 59	24 7.2
1	11	39 56	25 17.1	26	9½	48 11	21 26.0
21	10½	41 2	23 51.0	26	10	48 21	21 24.7
1	9	41 19	25 9.7	26	10	48 40	21 13.0
1	9	5 41 21	+25 10.4	21	10	5 48 48	+24 5.4

* (4).

† N. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
21	10	5 48 48	+24 6.9	21	11	5 54 24	+23 53.7
21	10½	48 51	23 59.9*	1	10½	54 25	25 25.7
1	10	49 16	25 14.6	26	11½	54 25	21 12.3
21	11	49 21	23 50.9	1	11	54 34	25 25.3
1	10	49 22	25 22.3	26	11½	54 35	21 16.4
21	10	49 34	23 51.7	21	10½	54 45	24 0.5
26	10½	49 43	21 22.1	1	10	54 47	25 17.6
26	9½	50 10	21 16.9†	26	9½	54 51	21 9.9
26	10½	50 15	21 11.9	26	11	55 2	21 16.1
21	11	50 31	23 53.1	21	11	55 39	24 5.0
26	10	50 36	21 25.0‡	21	10	55 40	24 2.0
21	12	50 44	23 55.4	21	10	55 40	24 3.5
21	9½	50 50	23 53.9	21	9½	55 43	23 56.8
1	10	51 7	25 18.7	26	9½	55 45	21 25.5
1	10	51 8	25 16.6	21	11	55 46	24 4.6
1	10½	51 14	25 17.4	26	9½	56 35	21 9.3
26	9½	51 49	21 23.0	21	10½	56 45	23 51.0
26	9½	51 53	21 9.4	26	10½	57 21	21 24.0
26	9	51 55	21 12.4	26	10	57 22	21 25.0
21	9½	51 58	23 54.2	26	11	57 32	21 20.1
21	10	52 2	23 57.2	26	10½	57 33	21 13.4
26	9½	52 32	21 27.1	26	9½	57 37	21 13.9
26	9½	52 37	21 17.7	21	9½	57 48	23 56.1
21	11	52 54	23 49.5	26	11	57 55	21 14.8
26	8	52 56	21 26.8	26	9½	58 0	21 15.4
26	9½	52 56	21 17.8	21	9½	58 1	24 7.0
26	9½	52 58	21 19.8	21	9½	58 20	23 57.7†
21	8½	53 0	23 55.3	21	9½	58 21	24 4.9
26	9½	53 0	21 24.7	26	11½	58 59	21 10.6
21	11	53 3	23 49.7	26	9½	59 7	21 7.0
1	10	53 27	25 26.6	26	10	59 25	21 7.7
1	9½	54 4	25 19.0	21	9½	59 36	24 6.8
21	9½	54 15	23 56.6	21	9½	5 59 39	24 6.3
21	10	54 16	24 0.5	21	8½	6 0 3	23 54.4
26	11½	5 54 22	+21 10.9	26	9½	6 0 17	+21 10.2

* S. *f.* of double. † (4). ‡ S. *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
26	9	6 0 28	+21 19.6*	21	9½	6 9 28	+23 56.5*
21	9½	0 29	23 53.3	26	10	9 38	21 16.2
26	9½	0 30	21 23.2	21	9½	9 46	23 49.6
21	9½	0 31	23 50.8	26	10½	10 4	21 13.6
21	9½	0 51	23 54.9	21	9½	10 42	23 52.9
26	8	1 8	21 15.3	26	9½	10 47	21 23.3
21	9½	1 11	24 7.2	21	9½	10 50	23 53.5
21	8½	1 46	23 49.7	26	9½	10 59	21 27.5
26	10	1 58	21 14.3	21	10	11 4	23 55.2
21	9½	2 9	24 0.4	26	10½	11 28	21 11.6
21	9½	2 17	24 3.0	26	8	11 34	21 9.0
26	10	2 22	21 17.7	21	10	11 55	23 54.4
26	9½	2 26	21 9.5	26	10	12 57	21 17.6
26	10	2 33	21 16.0	21	8½	13 21	24 7.3
21	9½	2 37	24 1.1	21	11½	13 22	24 5.7
26	10½	2 38	21 16.6	21	8½	13 31	24 6.6
21	9½	2 48	24 3.8	21	9	13 41	24 7.0
26	9	2 53	21 13.8	26	9	13 55	21 17.0*
21	9½	3 12	22 52.5	26	10	14 9	21 10.9
21	9	3 58	23 53.4	21	8½	15 19	24 0.4*
26	9½	4 4	21 14.4	21	10	15 23	24 3.6
26	11	4 19	21 14.4	21	10	15 24	24 1.8
26	9½	4 26	21 26.7	26	9½	15 41	21 11.9
26	9½	4 56	21 24.9	26	9	15 48	21 17.3
26	9	5 6	21 27.3	21	11	15 50	23 56.6
21	9½	5 38	23 57.0	21	9½	15 52	23 55.2
21	9½	6 2	24 3.6	26	8	16 2	21 21.7
26	9	6 30	21 17.2	26	11	16 17	21 10.7
21	9½	7 22	24 6.4	26	10	16 20	21 21.4
21	9½	7 37	24 7.4	26	10	16 29	21 12.1
26	10	8 21	21 13.5	21	11	17 5	23 54.6
21	9	8 22	23 50.0	21	9½	17 13	23 55.2
26	10	8 38	21 14.1	21	9½	17 18	23 53.4
26	10	8 45	21 15.6	26	11	17 23	21 9.9
26	10	6 9 27	+21 17.3†	26	11	6 17 31	+21 12.7

* (4). † N. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
26	9½	6 17 32	+21 14.5	21	9	6 24 5	+23 53.5
26	11	17 37	21 12.4	26	10	24 10	21 17.0
21	10½	17 41	23 56.7	26	11	24 34	21 14.0
26	10	18 44	21 17.3	21	11½	24 41	23 53.1
26	11½	18 59	21 17.4	26	8	24 50	21 9.5
26	11	19 3	21 16.7	21	9½	24 57	23 53.6
26	11	19 13	21 17.4	21	9½	25 5	23 51.4
21	9½	19 25	24 3.1	21	8½	25 25	23 57.0
21	8½	19 28	23 57.8	26	10½	25 36	21 12.1
21	11	19 36	24 3.0	21	9½	25 38	23 50.8
21	8½	19 47	23 54.3	26	9½	25 50	21 16.3
21	9½	19 53	23 54.8	26	9½	26 4	21 13.2
26	9½	20 34	21 17.2	26	10	26 21	21 24.6
26	9½	20 44	21 17.4	21	10	26 40	23 47.7
26	9	20 46	21 9.4	21	11	26 44	23 52.7
21	9½	20 57	23 52.8	26	9½	27 22	21 11.6
26	11	20 57	21 14.5	21	11	27 28	23 55.6
26	11	21 0	21 14.8	21	10	27 29	23 57.2
21	9½	21 1	24 6.8	21	9½	27 29	24 5.9
21	11	21 2	23 54.5	21	9½	27 43	24 2.3†
26	9	21 4	21 11.2	26	9	28 9	21 14.2
26	11	21 54	21 10.2	26	11½	28 12	21 10.1
21	9½	21 55	24 5.1	26	11	28 16	21 11.6
26	10½	22 6	21 14.0	26	10	28 38	21 11.9
21	11	22 10	24 5.3	26	9½	29 21	21 12.5
21	10½	22 17	24 6.5	26	10	29 22	21 10.7
26	10½	22 37	21 9.8	26	10	29 42	21 15.2
21	8½	23 6	23 54.4	21	9½	29 59	24 4.9
21	11½	23 7	23 51.9	26	9	30 16	21 24.4
26	11½	23 22	21 23.0	26	9½	30 24	21 24.9
26	10½	23 27	21 22.9	21	9½	30 35	24 1.4
26	11½	23 28	21 21.9	21	9½	30 37	24 2.6
21	10	23 35	24 3.5	26	11½	30 57	21 15.0
21	9½	23 56	53 49.9	26	11	31 22	21 14.8
26	9½	6 24 3	+21 17.0	26	9	6 31 29	+21 18.1

* (4).

† N. *f.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
21	9½	6 31 36	+24 4.3	21	9½	6 38 36	+23 47.2
21	10	31 42	24 3.7	21	9½	38 59	23 53.2
26	9½	31 47	21 15.2	21	11	39 7	23 52.5
26	11	31 56	21 17.5	21	10	39 26	23 54.7
21	9½	32 4	24 3.0	21	11½	39 36	23 54.1
21	9½	32 4	24 4.9	21	8½	39 50	23 54.1
21	8	32 4	24 6.2	26	11	40 31	21 25.5
26	8½	32 50	21 19.4	21	10	40 35	24 8.0
26	11	33 2	21 24.9	21	9½	40 46	24 3.5
26	11	33 3	21 27.2	21	9½	40 53	24 7.8
26	9	33 8	21 20.2	21	9½	40 59	24 6.1
26	11	33 11	21 26.7	21	10	41 34	24 7.7
21	9½	33 17	24 6.8	26	10½	41 54	21 14.9
21	9½	33 26	24 4.3	21	10½	41 57	23 50.4
21	9½	33 54	24 5.9	26	10½	41 57	21 14.9
21	9½	34 5	24 6.1	26	10	42 15	21 15.4
21	9½	34 9	24 6.8	21	9½	42 26	23 51.3
26	10	34 21	21 12.4*	26	10	42 26	21 14.8
21	8½	34 33	24 5.9	26	9	42 31	21 13.3
26	10	34 34	21 23.9	21	9½	43 3	24 2.4
21	9½	34 45	24 4.9†	21	9½	43 8	24 1.1
26	9	34 55	21 13.2	26	11½	43 13	21 11.6
26	10½	35 19	21 16.0	26	11½	43 15	21 12.3
26	10½	35 22	21 11.6	26	11	43 19	21 8.0
26	11	35 24	21 15.5	21	9½	43 50	24 3.1
26	10	35 26	21 12.0	26	12	43 55	21 11.0
21	9	35 54	24 2.1	21	9	43 58	24 1.9
26	9½	36 24	21 11.2	26	10	44 17	21 12.6
21	9	36 32	24 0.2‡	26	10	44 20	21 10.8
26	11	36 45	21 14.8	21	9½	44 33	24 3.4
21	10	37 11	23 53.3	21	9½	44 40	24 1.6
26	9	37 24	21 19.7	26	9	44 54	21 14.2
26	10	38 26	21 17.4	28	9	44 56	23 29.8
26	10	38 29	21 18.3	28	11	45 25	23 32.1
21	10½	6 38 34	+23 52.4	26	10½	6 45 29	+21 13.6

* S. of double. † N. *p.* of double. ‡ (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
21	10	6 45 38	+23 47.8	21	10	6 52 1	+24 6.8
21	9½	45 42	23 52.8	21	9½	52 10	24 7.3
28	9½	45 46	23 37.6	28	10	52 19	23 45.6
28	9½	46 0	23 34.4	28	10	52 32	23 43.8
21	10½	46 4	24 6.2*	21	8½	53 0	23 53.0
28	10	46 14	23 37.6	28	11	53 1	23 35.5
21	9½	46 31	24 6.7	28	10½	53 22	23 30.5
28	10	46 31	23 46.1	21	10½	53 27	23 55.4
28	9	46 38	23 40.6	21	9½	53 29	23 56.3
28	9½	47 6	23 43.2	28	9	53 32	23 34.9
21	9	47 25	24 8.1	28	11	53 35	23 31.9
28	10	47 35	23 26.8	21	11	53 47	23 55.7
21	8½	47 47	24 5.0†	21	10	53 49	23 57.0
21	9½	48 3	24 6.4	28	10	53 59	23 31.7
28	9	48 5	23 31.4	28	10	54 28	23 46.1
28	10	48 40	23 32.1	28	11½	54 48	23 30.9
21	9½	48 47	24 3.8	21	11	54 53	23 51.5
28	10½	48 57	23 31.1	21	8½	54 59	23 53.5
28	10½	49 0	23 39.8	28	9	55 1	23 36.9
21	9½	49 6	24 2.0	28	11½	55 5	23 32.0
21	10	49 22	23 57.3	21	9	55 16	24 4.1
28	9½	49 27	23 34.0	28	10	55 28	23 36.1
21	9½	49 35	23 58.3‡	28	9½	55 44	23 46.9
28	11	49 35	23 33.0	21	11	56 3	23 51.7
28	9½	49 39	23 30.3	21	10	56 4	23 56.8
21	10	49 44	23 57.6‡	28	10	56 11	23 33.3
28	10	50 8	23 48.5	28	10	56 24	23 34.2
28	11½	50 29	23 47.5	21	10½	56 47	23 53.8
28	10	50 43	23 48.6	21	9	57 9	23 53.0
28	9½	51 5	23 29.4	21 28	9½	57 10	23 49.9
21	11½	51 10	24 3.7	28	9½	57 26	23 49.1
21	11	51 10	24 4.2	21	9½	57 31	24 0.0
28	10	51 17	23 30.7	28	9½	57 34	23 43.5
28	10½	51 38	23 32.6	21	9½	57 39	23 59.5
21	9	6 51 43	+23 56.0	28	9½	6 57 51	+23 45.1

* N. *p.* of triple. † *f.* of 3. ‡ (4.)

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
28	9½	6 58 6	+23 42.1	28	10	7 5 16	+23 35.9
21	8	58 7	24 7.6	28	12	5 30	23 36.2
28	9	58 20	23 49.9	21	9	5 31	23 53.3
28	11	58 22	23 35.8	28	11½	5 47	23 36.3
28	10	58 59	23 47.1	26	11½	5 55	24 17.7
21	9	59 39	24 0.2*	26	11	6 2	24 18.5
21	9½	6 59 51	23 52.7	26	10	6 29	24 19.2*
21	10½	7 0 20	23 59.9	28	9½	6 31	23 42.0
28	10	1 28	23 35.6:	26	11	6 38	24 25.5
28	10	1 30	23 36.1	21	10½	7 16	23 54.2
28	11	1 35	23 43.9	21	10½	7 20	23 50.6
26	11	1 38	24 10.7	26	9½	7 20	24 16.9
21	10½	1 46	23 56.9	28	9	7 30	23 43.9
21	11½	1 58	24 3.4	28	9	7 34	23 44.4
21	9½	1 59	24 4.4	21	10½	7 41	23 51.0
21	10½	2 7	23 57.8	21	11	7 42	23 52.9
26	12	2 9	24 12.5	28	9½	7 45	23 40.3*
21	9½	2 29	24 4.9	28	10	8 4	23 36.5
26	10½	2 35	24 19.0	28	9	8 8	23 40.9
26	10½	2 35	24 13.0	21	9½	8 15	23 51.8
28	9	2 35	23 27.9	26	11	8 30	24 23.8
28	11	2 57	23 30.8	28	11	8 31	23 33.4
21	9½	3 4	23 54.9	21	8½	8 44	23 54.6
21	9½	3 21	24 4.2†	26	11	8 46	24 24.5
21	11	3 29	24 4.4	21	9½	8 55	23 56.2
21	10	3 33	24 8.2	21	11	9 10	23 55.7
28	12	3 34	23 45.6	21	11	9 16	23 56.5
21	11	3 35	24 5.7	28	8	9 21	23 44.0
26	9½	4 3	24 21.8	28	9½	9 34	23 35.2
21	10½	4 24	24 7.0	21	8½	9 35	24 2.7
28	10½	4 34	23 35.0	21	9	9 36	24 1.1
28	10	4 44	23 36.6	28	10½	9 42	23 42.3
26	11	4 58	24 11.5	26	10½	9 45	24 27.1
28	10	4 58	23 37.6	28	10	9 52	23 34.1
21	11	7 5 16	+23 54.2	26	10½	7 10 12	+24 16.7

* (4). † S. *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
26	9½	7 10 16	+24 14.9	21	10	7 14 47	+24 3.6
21	9½	10 25	24 10.0	26	10½	15 17	24 27.1
28	10	10 41	23 46.0	21	9½	15 18	23 54.8†
21	9	10 44	24 11.1	28	10½	15 20	23 31.3
28	9½	10 56	23 30.6	28	8	15 22	23 42.2
21	–	11 12	23 54.9	28	11½	15 26	23 33.6
21	9	11 13	23 52.4	26	9½	15 27	24 16.7
28	10	11 19	23 47.5	21	10	15 33	23 53.6
28	10	11 28	23 40.0*	26	11	15 37	24 22.2
26	10½	11 41	24 25.6	26	10	15 56	24 9.7
26	9	11 43	24 19.1	28	10	16 34	23 41.3
26	11½	11 47	24 23.4	21	11	16 35	24 2.5
26	9½	11 48	24 20.6	21	9½	16 48	24 3.8
28	11	11 56	23 46.6	28	11½	16 50	23 40.3:
28	11	12 0	23 44.6	26	8½	17 0	24 16.2
26	10	12 10	24 23.9	26	11½	17 4	24 15.5
26	11	12 19	24 22.4	28	11	17 7	23 43.6:
21	9½	12 23	23 58.9	28	9½	17 7	23 29.4
28	10	12 53	23 44.6	21	9	17 16	23 59.7
21	9½	12 59	24 0.1*	26	10½	17 16	24 16.2
28	11½	12 59	23 32.5	21	9	17 19	24 0.6*
26	11	13 16	24 28.0	26	9½	17 35	24 24.5
28	10	13 16	23 45.7	26	11½	17 46	24 24.0
26	9	13 17	24 24.6	21	9½	17 58	23 53.1
26	11	13 28	24 27.2	28	10	18 14	23 41.8
28	10	13 32	23 42.2	28	10	18 29	23 32.5
21	11½	13 37	24 1.9	28	10	18 32	23 40.2
26	9½	13 40	24 20.8	21	9½	18 42	24 6.2
21	9½	13 41	24 4.7	21	10	18 54	24 6.9
21	11	13 46	24 4.9	21	10½	18 55	24 7.1
28	10	14 17	23 45.8	26	11	19 13	24 18.8
26	10½	14 20	24 12.6	21 26	9	19 24	24 10.4
28	9½	14 22	23 31.2	26	9½	19 31	24 13.9
26	9½	14 30	24 11.0	26	9½	19 33	24 19.3
21	9½	7 14 40	+23 49.7	26	10	7 19 33	+24 20.7

* (4). † S. *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
21	10	7 19 41	+24 8.3	21	10	7 24 16	+24 5.2
21	10	19 51	24 7.3	26	9½	24 19	24 27.7
21	8	20 2	24 6.3	21	11	24 32	24 3.2
28	12	20 4	23 47.6	26	10½	24 54	24 22.6
26	11½	20 49	24 27.8	28	9½	24 59	23 33.7
26	11	20 51	24 27.7*	26	11½	25 0	24 22.9
21	8½	20 59	24 5.8	26	8	25 1	24 24.6
21	9½	21 9	23 57.5	26	11	25 23	24 26.3
28	11½	21 11	23 42.1	21	9½	25 29	23 54.0
28	11½	21 12	23 40.7	21	11	25 41	23 52.4
28	12	21 12	23 32.6	21	11	25 45	23 51.1
21	10	21 14	23 54.0	21	10½	26 21	23 50.9
28	10	21 17	23 31.3	26	11	26 21	24 23.8
21	9½	21 28	23 55.2	26	11	26 29	24 23.3
26	9½	21 35	24 24.2	26	9	26 29	24 11.9
21	8½	21 43	23 57.5	21	9½	26 30	24 5.6
26	10½	21 47	24 23.8	26	11	26 44	24 21.8
26	8½	22 2	24 28.2	21	11	27 0	23 50.0
26	8½	22 3	24 25.9	26	10	27 0	24 15.0
21	10½	22 8	24 1.8†	26	10	27 1	24 13.0
28	9½	22 18	23 32.1	21	11	27 13	23 50.9
28	9½	22 47	23 37.9	21	11	27 59	23 54.1
21	11	22 48	23 55.9	26	9½	28 21	24 23.9
28	10	22 48	23 34.7	26	10	28 32	24 24.1
28	10	22 53	23 30.7	26	10	28 32	24 14.6
21	11	23 0	23 55.7	21	9½	28 34	23 58.0‡
26	10	23 0	24 26.7	26	9½	28 42	24 14.3
28	10	23 5	23 34.8	21	11	28 56	23 53.0
26	11	23 15	24 26.3	21	10	29 18	23 57.2
28	9	23 22	23 31.4	21	9½	29 21	23 58.3
21	10½	23 31	24 4.0	26	8½	29 35	24 8.1
26	8½	23 31	24 24.1	21	8½	29 41	23 50.8
28	10	23 48	23 34.1	26	10	30 10	24 30.4
28	8	23 53	23 47.4	26	10½	30 16	24 24.8
21	9½	7 24 9	+24 2.8	26	10	7 30 26	+24 22.7

* Not same as preceding. † *p.* of double. ‡ (½).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
21	9½	7 30 43	+23 50.3	26	11	7 39 18	+24 23.2
26	10	30 47	24 14.4	21	10	39 35	23 57.7
21	10½	30 59	23 51.0	21	11½	39 35	23 50.4
26	9½	31 27	24 27.8	26	9½	39 36	24 24.1
21	9½	31 37	24 2.5	26	8	39 40	24 27.1
21	9½	31 38	23 52.0	21	10½	39 52	23 51.2
26	9½	32 0	24 25.6	21	11	40 26	24 1.0
26	10½	32 13	24 25.0	26	11	40 39	24 25.2
26	8½	32 14	24 28.4	21	9½	40 42	23 51.0
21	8½	32 35	23 52.2	26	8½	40 51	24 23.5
21	8½	32 37	23 57.6*	26	11	40 52	24 14.3
26	8	32 57	24 23.7	26	11	40 56	24 13.7
26	10½	33 20	24 25.1	21	10	41 23	24 7.6
26	9½	33 22	24 12.8	21	11	42 3	24 1.1
26	11½	33 25	24 23.0	26	11	42 28	24 13.0:
21	10½	33 43	23 49.6	26	11	42 32	24 12.4
26	8	33 46	24 28.7	21	9½	42 58	24 0.2
26	8½	33 57	24 22 2	26	9½	43 25	24 11.6
21	8½	34 11	23 53.7	26	10½	43 26	24 14.1
26	9½	34 13	24 28.2	21	10½	43 28	24 4.6
26	10	34 16	24 21.9	26	10½	43 28	24 15.5
26	10	34 24	24 22.7	21	8½	43 50	23 52.8
21	10	34 35	24 2.4	26	10	44 12	24 28.0
21	9½	34 48	23 54.9	26	10½	44 24	24 12.6
21	10	35 23	23 58.1	26	10½	44 31	24 12.7
21	10	36 4	24 1.6	21	9½	44 43	23 49.8
21	10	36 6	24 0.4	26	8½	45 12	24 16.0
26	11	36 17	24 27.1	21	8½	45 15	23 53.3
26	10	36 54	24 23.7	26	10½	45 18	24 13.7
26	10	36 54	24 25.2	21	10½	45 39	23 56.5
26	9½	37 21	24 28.0	26	11	45 51	24 14.2
26	11	38 5	24 25.2	21	10½	45 56	23 53.2
26	10	38 57	24 22.3	26	9½	46 2	24 19.5
26	8½	39 12	24 23.8	26	10	46 9	24 14.7
21	10½	7 39 18	+23 50.0	26	11	7 47 13	+24 28.1

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
21	10	7 47 23	+24 7.4	21	9½	7 53 39	+24 6.0
26	10	47 29	24 25.6	21	10	53 49	23 58.3
26	10	47 29	24 26.0	26	8½	54 12	24 21.1
26	11½	47 51	24 27.8	21	11	54 33	24 2.0
26	12	47 52	24 27.9	21	11	54 33	24 3.6
21	11	48 14	24 3.9*	26	11	54 59	24 24.1
21	11	48 24	24 5.5	21	11	55 43	24 4.3
26	8½	48 24	24 30.0	26	11	56 12	24 16.6
26	11½	48 57	24 25.7	26	9½	56 29	24 16.4
21	10	49 5	23 47.5	21	10½	56 52	24 6.6
26	11	49 23	24 23.4	26	9½	56 54	24 14.1
26	11	49 24	24 25.6	26	10½	56 57	24 19.0†
26	11	49 31	24 26.8	26	10½	57 0	24 19.0†
21	10	49 36	23 50.8	21	9½	57 14	24 3.9
21	11½	49 56	23 50.4	21	10	57 16	23 51.1
26	8½	50 36	24 17.1	21	9½	57 23	23 47.4
21	10½	50 42	24 8.3	21	9½	58 45	23 57.5
26	10	51 7	24 22.7	21	9½	58 53	24 3.9
21	10	51 18	24 3.8	21	10	58 56	24 8.3
26	10	51 21	24 22.9	21	8½	7 59 13	24 7.1
21	10	51 27	23 52.9.	21	10	8 0 22	24 0.7
26	9½	51 41	24 25.5	21	9½	0 23	24 0.7‡
26	10	51 49	24 12.7	21	9½	0 28	24 9.3
21	10½	51 51	24 2.7	21	9½	0 31	24 4.1
26	9	52 32	24 22.6	21	11	1 28	24 7.2
21	11	52 44	24 1.4	21	9	2 24	23 57.4†
26	11	53 6	24 17.8	21	9½	2 56	24 2.5
26	10½	7 53 15	+24 20.1	21	9	8 3 26	+24 0.0†

* S. p. of double. † (4). ‡ Not same as preceding.

NOTE.—26th—Between α. 5h. 47m. and 7h. 46m. the number of stars passing through the field was sometimes perplexing.

APPROXIMATE MEAN PLACES, FOR JANUARY 1, 1850,

OF

602 STARS NEAR THE ECLIPTIC,

OBSERVED IN MARCH, 1851, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	°			h. m. s.	°
6	9½	6 19 22	+23 26.3	6	11	6 30 23	+23 2
6	10	19 55	23 21.7	6	8½	30 31	23 2
6	11½	20 0	23 20.2	6	10	31 15	23 2
6	11	20 9	23 27.3	6	11	31 56	23 1
6	12½	21 8	23 25.7	6	11	31 56	23 1
6	10	21 43	23 22.3	6	11	32 1	23 1
6	10½	22 18	23 24.9	6	11½	32 11	23 1
6	10½	23 8	23 14.8	6	11	32 55	23 1
6	11	23 9	23 12.3	6	10	33 28	23 1
6	11	23 9	23 11.8	6	11½	33 56	23 2
6	12	23 34	23 14.7	6	10½	34 2	23 1
6	10	23 35	23 13.2	6	8½	34 45	23 2
6	10½	24 6	23 12.8	6	8½	34 47	23 2
6	9½	24 41	23 9.8	6	9	35 18	23 2
6	11	24 55	23 13.8	6	8	35 42	23 2
6	11	25 29	23 25.1	6	9	36 42	23 2
6	9½	26 6	23 28.0	6	10	36 43	23 2
6	9½	26 8	23 26.1	6	10½	36 59	23 1
6	10	26 42	23 26.1	6	11½	38 17	23 9
6	10	26 47	23 25.5	6	8	39 12	23 2
6	11½	27 20	23 15.2	6	9	39 20	23 1
6	11½	27 35	23 13.7	6	9	40 2	23 1
6	8	27 36	23 12.8	6	10	40 10	23 1
6	11½	27 44	23 13.7	6	8	40 49	23 1
6	9	28 41	23 23.1	10	10	40 53	20 3
6	9½	28 43	23 13.9	10	10½	41 7	20 3
6	10½	28 59	23 11.4	10	11	41 18	20 3
6	9	29 1	23 13.4	10	11	41 38	20 3
6	10	29 11	23 12.6	6	10	41 40	23 2
6	8½	6 30 19	+23 21.0	6	12	6 41 41	+23 2

* L. of double.

† (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
6	9	6 41 41	+23 26.0::	10	9½	6 48 10	+20 39.9*
6	8	42 37	23 24.9	10	8	48 18	20 41.2
6	9½	42 46	23 26.1	6	10	48 52	23 22.4
6	11	42 50	23 20.4	6	9	48 57	23 22.6
10	9	42 54	20 46.5	6	10½	49 18	23 22.1
6	11	42 56	23 19.9	6	8½	49 29	23 22.6
10	10	43 1	20 35.8	10	11	49 33	20 31.9
10	9½	43 12	20 46.8	10	11	49 56	20 43.3
10	10	43 17	20 40.3*	6	10	50 16	23 26.1
10	8	43 26	20 45.7	10	9½	50 20	20 45.9
6	7½	43 35	23 10.9	10	10	50 25	20 40.3
10	8	43 57	20 32.9	10	9	50 26	20 47.4
6	9	44 17	23 12.1	10	7	50 29	20 38.6*
6	9	44 37	23 15.5	10	9½	50 39	20 47.5
6	10	45 1	23 17.9	6	10	51 16	23 26.1
6	10	45 6	23 17.5	10	11½	51 44	20 47.1
10	9	45 21	20 35.9	10	10½	52 4	20 41.8
10	10½	45 30	20 46.8	6	10	52 10	23 26.0
10	10½	45 33	20 47.3	6	8½	53 4	23 17.1*
6	9½	45 34	23 20.9	6	10½	53 9	23 13.0
6	10	45 36	23 24.1	6	10½	53 17	23 11.0
10	10½	45 37	20 47.3	10	11	53 21	20 34.8
10	8½	45 42	20 39.8*	10	10	53 28	20 37.7
6	10	45 43	23 24.2	10	11	53 35	20 36.5
6	10	46 33	23 27.0	6	10½	53 37	23 15.1
6	10	46 42	23 26.6	10	10	53 51	20 37.6
6	11	46 47	23 26.1	10	9	54 25	20 36.0
10	9	46 59	20 30.6	10	10	54 38	20 33.9
10	9	47 13	20 46.8	6	11	54 47	23 13.1
6	9	47 29	23 11.0	6	8	54 49	23 17.4
6	11½	47 40	23 12.0	10	10	54 51	20 32.0
6	9	47 44	23 13.3	10	8½	55 2	20 31.8
6	9	47 49	23 10.1	6	9	55 29	23 16.7
10	8	48 4	20 44.8	6	11	55 40	23 16.6
10	8	6 48 4	+20 46.3	10	8	6 56 3	+20 43.9

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
10	8½	6 56 5	+20 42.4	6	11½	7 4 3	+23 12.2
10	10	56 23	20 41.0	10	10	4 13	20 33.0
6	11	56 28	23 14.7	10	9	4 16	20 33.6
10	9	56 36	20 36.6	10	11	4 28	20 35.3
10	10½	56 44	20 44.0	6	8	4 31	23 14.2:
6	12	57 28	23 13.2	6	8	4 58	23 14.3
6	12	57 30	23 14.1	6	10	5 50	23 21.2
10	8	57 44	20 49.5	10	10	5 52	20 36.2
10	7½	57 51	20 44.3	10	10	5 56	20 36.8
6	9½	58 2	23 21.2	10	10½	6 4	20 37.6
10	10½	58 16	20 31.4	6	10½	6 11	23 22.6
10	10	58 24	20 36.0	6	10	6 19	23 23.4
6	8½	58 25	23 21.4	6	8	7 6	23 13.4
6	7½	58 34	23 25.7	10	10	7 17	20 32.1
10	10	59 12	20 30.9	6	11	7 18	23 26.5
10	11	59 33	20 33.3	10	9	7 18	20 35.9
6	11	59 39	23 12.0	10	10	7 30	20 38.1
6	10	6 59 48	23 21.2	6	11½	7 33	23 22.3
10	10½	7 0 1	20 30.2	6	11	7 36	23 24.9
6	11	0 4	23 12.5	10	9½	7 46	20 35.0
6	10½	0 7	23 12.5	6	–	7 52	23 25.7
10	11	0 40	20 34.2	10	9	8 10	20 34.9
10	8	0 57	20 43.7	6	8	8 34	23 11.6
10	10	1 4	20 38.1	10	10½	9 4	20 45.5
10	9	1 12	20 35.2	6	11	9 10	23 12.2
10	8	1 43	20 41.5	6	8½	9 15	23 17.5†
6	8	1 58	23 19.6	6	11½	9 15	23 11.6
6	10	1 59	23 23.7	6	10	9 21	23 12.4
6	10	2 6	23 22.9	6	9	9 41	23 13.6
6	10	2 29	23 13.4	10	10	10 3	20 35.4
6	11	2 30	23 12.5	10	10	10 9	20 37.7
10	10	2 36	20 42.6*	10	9½	10 12	20 34.3
10	10	2 48	20 41.8	6	11	10 35	23 8.7
10	10½	3 13	20 46.0	10	11	10 44	20 37.9
10	9	7 3 42	+20 41.9	10	11	7 10 52	+20 38.3

* L. of 3.

† (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
6	11	7 11 28	+23 13.8	10	8	7 20 52	+20 30.0
6	8	11 31	23 11.2	10	9	21 1	20 36.6
10	11	11 32	20 44.9	6	10½	21 20	23 16.9
6	11	11 38	23 18.0	10	9½	21 27	20 33.6
6	10	11 52	23 13.4	6	11	21 54	23 12.5
6	11	12 6	23 8.9	6	8	22 34	23 11.9
6	10	12 46	23 25.6	10	9	22 38	20 38.2
6	10	12 52	23 24.9	6	12½	22 50	23 10.7
10	12	12 52	20 46.1	10	9	22 51	20 45.5
6	7	13 29	23 24.2	6	9	23 26	23 13.1
10	8½	14 31	20 31.9	6	9½	23 54	23 14.8
10	9	14 41	20 48.3	10	11½	24 36	20 46.7
10	9	14 53	20 42.5	10	9½	24 50	20 46.6
6	11½	15 8	23 21.2	6	10	24 56	23 27.4
6	10	15 13	23 22.0	10	10	24 59	20 43.5
10	10	15 17	20 32.9	6	11½	25 2	23 24.3
6	11	15 19	23 22.3:	6	12	25 6	23 22.2
6	9	15 27	23 14.9	6	11½	25 19	23 22.8
10	11	15 38	20 36.3	6	9½	25 26	23 25.3
10	10	15 48	20 36.6*	10	10½	25 54	20 29.6†
6	11	16 30	23 11.7	10	10	25 55	20 29.5†
6	8½	16 50	23 14.7	10	8	26 18	20 38.5
6	9	17 13	23 20.4	10	10½	26 30	20 48.7
10	11	17 37	20 34.4:	10	9	26 39	20 32.5
10	10	17 45	20 30.7	6	9	27 15	23 21.0
6	9	18 14	23 16.9	6	10	27 16	23 13.0
6	8	18 17	23 27.3	6	10	27 23	23 13.6
6	9	18 20	23 24.3	6	10½	27 34	23 13.5
10	8	18 47	20 32.1	10	11	27 50	20 47.0
10	11	18 53	20 31.3	6	10½	28 26	23 25.3
6	9	19 2	23 15.8	6	12	28 33	23 26.4
6	8	19 28	23 10.2	6	12	28 34	23 24.8
10	11½	20 26	20 32.0	10	10½	28 42	20 34.8
6	11½	20 46	23 22.1*	10	9½	29 18	20 34.0
10	8	7 20 46	+20 30.6	6	11	7 29 36	+23 16.6

* N. *p.* of double.

† Not same.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
6	10	7 29 36	+23 11.6	10	11	7 37 43	+20 32.1
6	11½	29 38	23 12.8	6	11	37 51	23 23.3
6	11	29 55	23 14.0	6	10	38 6	23 23.8
10	8	30 0	20 43.3	10	9½	38 19	20 31.0
6	11	30 8	23 15.4	6	10½	38 24	23 22.5
6	11½	30 14	23 15.0	10	10½	38 24	20 33.9
10	9½	30 36	20 35.6	6	10½	38 51	23 9.8
10	10	30 43	20 43.9	10	9	39 1	20 36.3
6	10	31 8	23 5.9	10	11	39 12	20 46.4
10	11	31 41	20 33.2	6	11	39 29	23 27.0
6	11	32 3	23 23.5	6	9	40 8	23 25.7
10	10	32 4	20 34.9	6	9	40 22	23 21.7
10	10½	32 26	20 33.6	6	9	40 24	23 10.9
6	10½	32 34	23 21.9	10	9	40 27	20 37.2
10	10½	32 40	20 33.0	10	11	40 38	20 42.9
10	9	33 3	20 29.7	10	10	40 40	20 33.2
6	10	33 5	23 25.3	10	9½	40 48	20 44.7
6	12	33 14	23 22.0	6	9½	41 1	23 11.9
10	11	33 32	20 32.2	6	9½	41 17	23 12.7
10	9	33 49	20 45.5	10	11	42 9	20 45.7
10	9	34 8	20 48.3	6	8	42 32	23 19.5
6	11	34 16	23 11.2	6	10½	42 34	23 21.5
6	10½	34 18	23 9.7	6	10	42 40	23 21.0
6	10½	34 25	23 13.9	6	10½	42 51	23 20.1
6	11	34 28	23 16.3	6	11½	43 3	23 21.3
10	11	34 35	20 48.4	10	10	43 3	20 42.6
10	10	34 52	20 45.1	10	9	43 32	20 40.4
10	10	35 9	20 47.8	6	11	44 5	23 12.2
6	9	35 39	23 15.9	6	11	44 17	23 27.4
10	9	35 46	20 42.8	6	11½	44 50	23 26.1
6	7	36 0	23 21.8:	6	11	45 20	23 9.9
6	11½	36 6	23 15.4	10	10	45 35	20 48.8
10	9½	36 10	20 46.1	6	11	45 40	23 12.8
6	11½	36 21	23 16.2	6	10½	46 26	23 15.0*
10	9½	7 37 5	+20 32.1	6	11½	7 47 46	+23 24.5:

* S. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
6	11½	7 47 55	+23 24.2:	10	10½	7 55 5	+20 35.0
10	9½	48 44	20 41.4	10	9½	55 19	20 34.1
6	10½	49 2	23 10.9	10	9½	55 21	20 33.2
10	9½	49 2	20 44.9	6	10	55 31	23 9.9
10	9½	49 11	20 44.7	6	10½	55 42	23 15.9
6	8	49 15	23 27.6	6	8	55 46	23 14.4
6	8	49 45	23 25.2	10	11	56 0	20 30.2
6	11	49 54	23 25.1	6	12	56 40	23 9.7
6	8½	49 59	23 27.4	10	11	56 45	20 31.0
10	9	50 2	20 30.1	6	10½	56 56	23 12.7
10	9½	50 17	20 41.1	6	9	57 23	23 15.6
6	9	50 34	23 27.1	10	11	57 34	20 46.2
10	9	50 39	20 37.0	10	9	58 16	20 44.2
6	9	50 47	23 25.5	6	8	58 17	23 26.9
6	9	50 57	23 26.7	10	10½	58 23	20 47.1
10	10½	51 38	20 41.8	6	9½	58 28	23 25.4
6	10	51 43	23 10.0	10	10½	58 37	20 45.6
10	9½	51 48	20 46.1	6	9½	58 42	23 22.7
10	11	51 54	20 35.7	6	10	59 12	23 20.6
6	10½	51 55	23 13.1	6	10	59 19	23 23.8
10	11	51 56	20 45.7	10	9	59 22	20 43.9
6	11	52 18	23 15.8	6	9	59 23	23 24.2
6	9	52 18	23 12.6	10	8½	59 55	20 43.0
10	10	52 36	20 48.9	10	10½	7 59 55	20 45.9
10	10	53 14	20 49.6	10	10	8 0 0	20 40.9
6	10	53 18	23 12.1	10	9½	0 9	20 42.6
6	11	53 30	23 13.4	6	11	0 42	23 26.2
6	11	53 34	23 11.3	6	10	0 50	23 26.2
6	11½	53 45	23 13.0	10	9½	1 13	20 47.8
10	10½	53 48	20 48.8	6	11	1 19	23 26.9
10	10	53 54	20 42.3*	6	8	1 34	23 29.9
10	11	54 0	20 46.5	10	10	1 42	20 47.5
6	8	54 29	23 30.1	10	9½	1 58	20 41.2
6	10½	54 32	23 25.6	10	10	2 3	20 44.3
6	8½	7 54 54	+23 29.5	6	10½	8 2 11	+23 14.1

* L. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
10	10	8 2 33	+20 36.1	10	9½	8 11 3	+20 39.3
6	8	2 36	23 27.6	10	8	11 3	20 48.1
6	12	3 3	23 10.8	6	10½	11 14	23 13.9
6	12	3 4	23 10.3	6	11½	11 16	23 10.9
6	11	3 47	23 26.0	10	9½	11 32	20 47.9
6	8	4 0	23 25.9	10	10	11 44	20 44·1
6	10	4 4	23 20.4	6	11½	11 49	23 22.0
10	11	4 4	20 35.0	6	9	11 52	23 20.7
10	11½	4 33	20 44.2	6	11	12 15	23 22.4
10	11	4 34	20 38.6	10	10	12 33	20 29.9
10	11	4 46	20 43.6	10	10½	13 26	20 37.0
6	8	4 55	23 14.4	10	11½	13 29	20 34.2
10	11	4 56	20 44.0	10	10	13 42	20 30.8
10	11½	5 1	20 43.9	6	8	13 43	23 13.0
6	9	5 11	23 25.2	6	11½	13 50	23 10.1
6	8	5 18	23 26.1	6	11½	13 55	23 13.7
6	9	5 35	23 14.6	10	9½	14 6	20 40.2*
6	12	6 43	23 9.6	10	7½	14 22	20 29.7
6	11	6 47	23 15.8	10	11	15 27	20 34.4
10	10½	6 47	20 33.1	10	10	15 29	20 32.4
10	10	6 49	20 34.1	10	10	16 8	20 31.3
6	11	6 50	23 14.3	10	11	17 17	20 44.0
10	9½	7 10	20 44.0	10	10	17 29	20 35.3
10	9½	7 31	20 31.0	10	10	17 35	20 47.7
6	10	7 51	23 13.2	10	10	17 41	20 46.2
10	11	8 16	20 30.9	10	10	17 48	20 38.4*
10	11	8 17	20 30.0	10	11½	18 25	20 38.2
6	8	8 30	23 15.7	10	10½	18 31	20 38.4
10	11½	8 51	20 47.0	10	9	20 3	20 43.7
10	10	9 15	20 44.4	10	11	20 8	20 41.2
10	11	9 23	20 43.6	10	11	20 20	20 43.5
6	11	9 34	23 27.4	10	11	20 23	20 46.0
6	11	9 42	23 26.4	10	10	21 4	20 40.9
6	10	9 59	23 26.6	10	9½	21 20	20 49.0
6	12	8 10 39	+23 11.7	10	10	8 21 23	+20 40.7

*(4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
10	11	8 21 34	+20 41.8	10	9½	8 34 58	+20 43.6
10	10½	21 40	20 40.5	10	10	35 5	20 42.8
10	10	22 20	20 40.4	10	11	35 12	20 41.8
10	12	23 37	20 30.3	10	9½	35 30	20 36.8
10	12	23 39	20 31.8	10	9½	35 50	20 44.6
10	11½	24 41	20 33.4	6	10	35 57	19 55.8†
10	9½	24 47	20 35.4	6	8	36 12	19 58.0
10	9½	25 2	20 45.7	10	10½	36 48	20 30.0
10	10	25 26	20 38.3*	10	10½	36 50	20 43.9
10	11½	25 53	20 44.2	10	10½	37 1	20 33.7
10	10½	26 7	20 45.4	6	9	37 14	20 9.7
10	10	27 6	20 37.5	6	11	37 23	19 53.8
10	9	27 25	20 41.8	6	10	37 26	20 6.5
10	8½	27 41	20 40.3*	6	9	38 12	20 11.3
10	8	28 56	20 31.9	6	12	38 23	20 10.2
6	11	30 13	20 6.2	6	11½	38 57	20 5.9
6	10	30 22	19 56.8	6	11	39 1	19 51.1
10	9	30 27	20 38.4	6	9	39 51	20 11.5
6	9½	30 49	20 0.1	6	9½	40 0	20 9.0
10	9	31 20	20 41.1	6	11½	40 41	19 52.4
10	9½	31 44	20 38.0	6	10½	40 47	19 56.9
6	11	32 6	20 5.6	6	9	41 7	20 10.8
6	11	32 10	20 4.3	6	10½	41 58	19 52.1
10	9½	33 6	20 45.4	6	9½	42 4	19 58.5
6	11	33 11	19 52.6	6	10	42 16	19 54.6
6	11	33 13	19 50.4	10	10	43 15	20 38.2
10	8½	33 15	20 41.4	6	10½	43 55	20 1.7
6	11	33 16	19 55.4	6	10	44 0	20 2.4
6	8	33 30	19 56.5	6	9	44 13	20 4.0
10	11½	33 38	20 42.2	6	10½	44 15	20 1.7
10	10½	33 50	20 48.2	10	10	44 17	20 30.5‡
6	10	34 28	20 7.7	10	12	44 44	20 29.8
6	8	34 30	19 58.3	10	10½	45 34	20 36.1
10	10	34 34	20 46.2	6	11½	45 48	20 6.7
6	11	8 34 35	+20 3.7	10	10½	8 45 53	+20 44.9

* (4). † N. of double. ‡ *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
10	10	8 45 56	+20 31.2	10	11	8 52 26	+20 43.8
6	9	46 43	19 55.4	6	11½	52 30	20 4.0
6	9½	46 53	20 6.1	10	12	53 5	20 42.6
6	9	46 53	20 7.1	6	10	53 12	19 50.9
6	9	46 55	19 56.2	6	9	53 13	19 55.2
6	9	47 5	20 5.7	6	9	53 28	19 55.6
10	11	47 29	20 34.2	6	10	54 13	20 4.5
10	11½	47 30	20 35.3	6	10½	54 21	20 9.8
6	12	48 9	20 0.0	10	9½	54 33	20 38.3
6	8	48 33	20 7.8	10	11	54 58	20 38.3
6	11½	48 37	19 53.8	10	9	55 3	20 41.5
10	11	48 38	20 37.3	10	9½	55 21	20 44.7
10	10½	48 48	20 34.6	10	10	55 26	20 36.6
10	9	50 5	20 45.8	6	10½	55 40	19 58.6*
6	11	50 8	20 1.6	6	8½	55 50	19 58.4*
6	8	50 35	20 9.2	10	11	56 39	20 35.1
6	10	50 37	19 57.2	10	11	56 39	20 34.0
10	9	50 52	20 40.8*	10	11	57 2	20 41.2
10	11½	50 53	20 31.1	10	10	57 20	20 37.2
6	9	51 1	19 58.3*	6	9	57 51	20 3.5
10	9½	51 5	20 39.8	10	10	58 19	20 33.0
6	9	51 13	19 52.5	10	9	58 22	20 50.3
10	11	51 22	20 32.3	10	10	58 46	20 46.8
10	11	51 26	20 32.7	10	9½	59 39	20 30.5
10	9½	52 15	20 41.5	10	9½	8 59 48	20 41.2
6	9½	8 52 17	+20 7.9	10	10	9 0 4	+20 37.2

* (4).

APPROXIMATE MEAN PLACES FOR JANUARY 1, 1850,

OF

850 STARS NEAR THE ECLIPTIC,

OBSERVED IN APRIL, 1851, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
1	11	8 58 14	+13 34.9	1	9½	9 8 56	+13 46.0
1	9	58 22	13 39.5*	1	10½	9 31	13 30.0
1	10	58 29	13 33.6	1	10	9 36	13 33.4
1	9½	8 58 45	13 41.5	1	9	9 49	13 37.8
1	11½	9 0 0	13 33.9	1	11½	10 29	13 43.4
1	11	0 8	13 34.8	1	9½	11 24	13 42.2
1	9½	0 36	13 41.8	1	9½	12 59	13 43.5
1	9½	0 46	13 41.6	1	11½	13 5	13 41.2
1	10½	1 6	13 46.3	1	10½	13 38	13 41.8
1	10½	1 8	13 48.0	1	10	14 19	13 44.2
1	10	2 15	13 33.7	1	10½	14 28	13 36.4
1	9½	2 21	13 50.9	1	9½	14 38	13 34.1
1	9½	2 23	13 48.4	1	9½	15 5	13 43.7
1	10	3 55	13 43.3	1	10	16 4	13 42.2
1	11	4 0	13 36.4	1	10½	16 26	13 41.7
1	11½	4 5	13 35.7	1	9½	16 26	13 45.6
1	12	4 15	13 35.8	1	10	16 32	13 42.2
1	9	5 15	13 34.7	1	10½	16 33	13 44.6
1	11½	5 34	13 41.4	1	9½	17 42	13 32.3
1	8½	5 43	13 44.9	1	9½	17 47	13 41.8
1	11	6 12	13 33.7	1	10	17 51	13 33.5
1	9½	6 25	13 37.2	1	9	17 57	13 37.1*
1	9	6 38	13 33.9	1	10	18 5	13 35.0
1	9½	6 48	13 29.9	1	10	18 10	13 33.9
1	9½	6 49	13 30.1	1	11	19 37	13 42.9
1	9½	7 35	13 48.3	1	9½	19 50	13 40.4*
1	10	7 52	13 43.1	1	9	19 56	13 31.1
1	9	8 14	13 33.5	1	11½	21 11	13 31.3
1	9½	8 31	13 43.1	1	11½	21 12	13 29.9
1	9½	9 8 43	+13 46.1	1	8	9 22 7	+13 29.6

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
1	10	9 22 9	+13 36.2	1	10	9 39 0	+13 44.8
1	7	22 15	13 35.7	1	8½	39 18	13 40.6
1	9½	22 22	13 31.1	1	11	39 32	13 41.5
1	7	23 10	13 31.0	1	10	39 37	13 31.7
1	10½	23 18	13 30.6	1	10	42 1	13 34.9
1	11	23 21	13 31.0	1	10	42 4	13 45.8
1	11	24 9	13 47.3	1	10½	42 45	13 47.8
1	11	24 45	13 39.9	1	10	43 30	13 32.1
1	10½	24 58	13 44.3	1	10	43 39	13 36.4
1	11	25 23	13 41.6	1	10	43 41	13 33.0
1	10½	25 29	13 35.3	1	10½	43 53	13 33.2
1	9½	25 37	13 35.2	1	12	45 2	13 45.7
1	11	28 38	13 30.4	1	12	45 6	13 45.9
1	11	28 53	13 40.5	1	9½	45 39	13 36.5
1	10	29 4	13 34.1	1	11	45 51	13 32.2
1	10	29 17	13 33.5	1	10	46 10	13 35.3
1	9½	30 6	13 46.9	1	9	46 47	13 42.2
1	9½	30 8	13 43.6	1	9	47 33	13 44.5
1	10	30 26	13 42.2	1	9	48 11	13 31.6
1	10	30 29	13 44.7	1	11½	48 24	13 36.8
1	9	31 40	13 42.4	1	9½	48 31	13 29.6
1	9	31 40	13 45.3	1	11	49 30	13 32.5
1	9½	32 22	13 40.3	1	10½	49 51	13 33.3
1	11	33 18	13 37.9	1	9	50 17	13 31.7
1	10½	34 15	13 31.4	1	10½	50 40	13 33.7
1	11	35 7	13 34.1	1	9½	51 3	13 34.9
1	10	35 18	13 41.0	1	9	51 34	13 37.8*
1	10½	35 23	13 35.3	1	9½	51 39	13 36.7*
1	11	35 29	13 36.4	1	9	52 5	13 42.8
1	10	36 23	13 44.5	8	9½	52 6	10 21.5
1	10½	36 41	13 31.5	8	11	52 7	10 12.5
1	10	36 55	13 33.9	8	10	52 28	10 9.6
1	10½	37 4	13 32.8	1	9	52 29	13 42.5
1	10	38 3	13 35.7	8	9½	53 2	10 23.9
1	9	9 38 50	+13 45.2	8	9	9 53 44	+10 19.8*

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
1	11	9 53 48	+13 35.6	3	11	10 1 57	+10 8.9
8	10	53 53	10 18.3	1	9	2 31	13 39.4
1	11	54 5	13 33.3	8	10	2 45	10 19.0
1	10	54 7	13 33 4	3	8½	2 59	9 58.6*
8	9½	54 32	10 24.1	1	10½	3 5	13 40.1
3	11	55 20	9 51.6	1	10½	3 9	13 41.2
3	11	55 20	9 50 9	1	10	3 14	13 31.3
8	9½	55 28	10 27.9	3	10	3 22	9 52.5
1	11	55 30	13 32.6	3	10½	3 32	10 3.2
1	10	55 49	13 34.0	8	10	3 36	10 18.6
8	10	55 59	10 19.9*	1	9	3 52	13 45.0
3	10	56 5	10 4.2	8	9½	3 54	10 28.0
8	10	56 6	10 10.2	3	11	4 26	9 51.8
8	10½	56 10	10 27.2	1	11	4 30	13 30.0
1	9½	56 52	13 31.4	1	11	4 33	13 31.4
8	8½	57 22	10 11.4	1	9½	4 47	13 41.1
3	11	57 24	10 6.9	1	9	5 4	13 29.3
8	9½	57 26	10 24.0	8	9	5 4	10 29.7
8	9½	57 29	10 26.5	8	9	5 13	10 21.5
8	9½	57 43	10 22.4*	1	9½	5 21	13 35.1
8	9½	58 2	10 26.0	8	11	5 21	10 22.8
1	11	58 22	13 42.8	1	9½	6 23	13 43.1
3	9½	58 43	9 53.1	8	10½	6 33	10 25.7
8	11	59 9	10 19.5	1	9	6 45	13 46.0
8	10	59 11	10 13.9	8	9	6 51	10 21.6*
3	11½	59 33	10 3.9	1	9½	6 54	13 44.7
3	10½	59 43	10 6.5	1	9½	7 1	13 47.7
3	11½	9 59 43	10 8.1	3	10½	7 16	9 52.7
1	9	10 0 11	13 38.2*	3	10½	7 18	9 51.3
1	9	0 11	13 33.8	8	11	7 34	10 13.5
1	9	0 42	13 44.7	8	10	7 46	10 19.2
3	10	0 59	9 55.6	1	9½	7 55	13 44.1
1	11	1 4	13 34.5	1	9½	7 58	13 47.1
3	11	1 8	9 56.6	8	9½	8 19	10 27.3
1	9½	10 1 24	+13 39.7	3	11	10 8 20	+10 4.5

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
1	9½	10 8 21	+13 33.6	8	9	10 14 2	+10 27.9
1	9½	8 32	13 44.3	1	11	14 8	13 40.9
8	9½	8 33	10 26.9	1	10½	14 18	13 40.0
3	10½	8 38	10 5.2	1	9½	14 29	13 35.3
1	9½	8 58	13 30.9	8	8½	14 30	10 32.8
1	10½	9 0	13 33.7	1	9½	14 40	13 35.5
1	10	9 9	13 37.4	8	11	15 11	10 28.5
3	9	9 10	9 54.2	8	9½	15 17	10 19.5
3	11	9 26	9 52.1	8	10	15 37	10 29.9
8	10	9 36	10 32.1	8	11	16 54	10 22.2
8	9½	9 41	10 26.3	8	11	16 56	10 26.3
1	11	10 10	13 39.9	8	8½	17 14	10 22.0*
8	10	10 13	10 11.0	8	9½	17 25	10 23.0
8	11	10 14	10 26.8	8	10½	18 49	10 17.5
3	8½	10 20	9 59.6	8	10½	18 55	10 23.5
8	9½	10 43	10 32.0	8	9½	20 51	10 14.5
3	10	10 51	10 0.7*	8	10	21 12	10 8.6
8	9½	11 1	10 33.2	8	11	21 47	10 13.9
8	9	11 30	10 28.5	8	11	23 6	10 15.1
8	10½	11 31	10 24.4	8	10½	23 11	10 12.7
8	11	11 34	10 22.6	8	11	23 20	10 15.9
1	9½	11 37	13 47.8	8	9½	24 42	10 10.2
8	11	11 52	10 26.3	8	10	24 43	10 21.8*
1	10½	12 2	13 38.0	8	9½	25 44	10 14.4
1	10	12 19	13 35.6	8	10	26 4	10 27.8
1	9½	12 55	13 34.6	8	11	26 42	10 26.7
1	10½	12 55	13 30.1	8	11	26 42	10 23.1
8	10	13 3	10 26.9	18	10	27 31	6 13.0
8	10½	13 4	10 30.9	18	10	27 39	6 7.2
3	11	13 15	9 57.1	18	9	27 47	6 15.8
1	9½	13 24	13 44.6	18	7	28 10	6 26.3
3	11	13 24	9 58.4	8	10	28 22	10 25.7
3	9	13 34	9 50.3	18	10	28 25	6 16.5
3	11	13 38	9 55.7	8	10½	28 26	10 24.6
8	10	10 13 43	+10 31.9	8	10½	10 29 35	+10 9.0

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
8	10½	10 29 49	+10 8.3	8	8½	10 37 9	+10 18.4†
18	9½	29 50	6 21.5	18	11	38 4	6 21.9
18	10	29 53	6 26.2	18	10½	38 20	6 22.4
18	8½	30 43	6 9.2*	18	11	38 23	6 10.6
8	10	30 48	10 11.0	18	9½	38 30	6 14.1
8	10	30 56	10 11.1	8	10½	39 5	10 25.8
18	11	31 10	6 30.2	8	10½	39 8	10 14.5
8	10	31 22	10 27.8	8	10½	39 29	10 25.5
8	11	31 33	10 28.8	18	10	39 41	6 26.7
8	9½	31 56	6 20.8	18	11	39 48	6 24.2
18	9½	32 0	6 11.9	18	10½	40 9	6 25.2
8	9½	32 10	10 28.0	8	10½	40 35	10 23.1
8	9½	32 20	10 26.9	8	10	40 42	10 26.1
8	9	32 27	10 27.8	18	10	40 58	6 15.3
18	9	32 50	6 14.8	8	9½	40 59	10 25.3
18	10	32 50	6 11.7	8	10	41 4	10 15.2
8	10	32 58	10 27.8	18	9½	41 4	6 29.2
8	10½	33 2	10 9.2	18	10½	41 15	6 22.5
18	10	33 40	6 6.5	8	11	41 45	10 10.2
8	11	33 41	10 27.2	8	10	42 4	10 12.9
8	11	33 42	10 27.7	18	10	42 20	6 9.4
8	9½	34 16	10 9.1	18	9	42 35	6 18.9
8	10	34 31	10 11.5	18	9	42 46	6 10.8
18	10	34 39	6 13.7	8	8½	42 58	10 13.0
8	9½	34 40	10 14.7	8	11	43 15	10 16.0
18	9½	34 48	6 15.3	8	9½	43 48	10 13.6
18	10½	35 36	6 22.9	18	11	43 53	6 10.5
18	10	35 37	6 20.7†	18	10	44 15	6 28.0
8	9½	35 51	10 28.3	18	10½	44 50	6 13.4
8	11	35 54	10 14.2	18	10	45 0	6 12.7
8	8½	36 29	10 9.6	18	11	45 37	6 22.4
8	9½	36 49	10 21.8	18	8½	46 6	6 17.6
8	10	37 1	10 8.4	18	9½	46 12	6 14.6
18	10	37 1	6 24.8	18	11	46 29	6 13.8
18	9	10 37 6	+6 26.9*	18	10½	10 46 34	+6 13.3

* L. of double.

† (4.)

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
18	11	10 46 46	+6 16.1	18	11	10 58 51	+6 22.9
18	9½	47 28	6 20.3	18	11	59 12	6 12.5
18	10	47 52	6 12.4	18	10½	59 35	6 13.8
18	11	48 37	6 27.8	18	9	10 59 55	6 12.9
18	10½	48 54	6 23.8	18	10½	11 0 8	6 25.1
18	9½	49 33	6 15.3	18	9½	1 20	6 28.6
18	10½	49 55	6 24.2	18	11½	1 26	6 23.7
18	10	50 12	6 16.3	18	11	2 5	6 24.6
8	10	50 54	10 12.1	18	9½	2 15	6 24.4
8	9½	51 16	10 15.0	18	10	2 15	6 17.4
18	8½	51 25	6 19.4	18	9	2 18	6 28.8
8	11	52 4	10 15.1	18	11	3 37	6 12.1
8	11	52 9	10 9.0	18	9½	4 14	6 20.7*
8	11	52 26	10 18.5	18	10	4 25	6 19.8*
8	9½	52 48	10 26.0	18	9	4 58	6 14.2
18	10	52 51	6 23.2	18	9½	5 55	6 10.6
8	10	53 3	10 27.6	18	10	6 50	6 12.7
18	11	53 9	6 14.1	18	9	7 8	6 25.1
18	10½	53 17	6 15.3	18	10½	7 39	6 23.5
8	10	53 37	10 21.3	18	11	7 40	6 27.7
8	10½	54 19	10 18.0	18	11½	9 1	6 17.1
18	9½	54 28	6 15.5	18	10½	9 1	6 15.7
18	11½	54 36	6 15.7	18	10	9 21	6 22.6
18	11	54 49	6 12.8	18	10	9 26	6 16.4
8	9½	54 52	10 27.4	18	9	10 7	6 27.5
18	10	54 53	6 14.4	18	10	10 43	6 12.9
18	11	55 9	6 24.3	18	8	11 32	6 30.1
18	11	55 16	6 22.8	18	9	12 6	6 30.0
18	10	56 8	6 11.7	18	9½	12 18	6 17.3
18	10	56 27	6 17.4	18	8	12 21	6 28.3
18	11	56 53	6 9.6	18	9½	12 38	6 28.3
18	11	57 4	6 13.8	18	11	12 49	6 17.4
18	11	57 18	6 14.3	18	11	13 44	6 27.2
18	10½	57 36	6 12.3	18	11	14 54	6 19.7*
18	12	10 58 14	+6 25.7	18	9	11 15 31	+6 17.9*

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
18	9½	11 15 35	+6 17.7*	25	9½	11 26 53	+1 19.0
18	8	17 9	6 13.2	25	9	27 10	1 26.4
18	11½	17 22	6 15.9	18	10	27 53	6 13.6
18	11	17 27	6 14.9	18	8	28 0	6 18.9
18	11	18 41	6 20.8	18	10½	28 3	6 13.1
18	11	18 59	6 14.8	25	9½	28 11	1 19.3
18	11	19 4	6 17.2	18	10	28 17	6 14.1
18	11	19 7	6 14.7	25	9	28 18	1 15.1
18	11	19 7	6 11.9	25	9	28 29	1 10.3
18	11½	19 59	6 11.5	18	10	28 32	6 14.9
18	9½	20 17	6 9.8	18	10½	28 38	6 15.7
18	10	21 6	6 21.4	25	8	28 40	1 25.5
25	11	21 10	1 25.5	25	9½	29 42	1 21.9
25	10	21 23	1 27.7	26	10	30 37	0 32.3
18	10½	21 24	6 11.4	25	11	30 46	1 22.1
25	9½	21 31	1 29.6	18	11	30 49	6 24.0
18	11	21 47	6 12.6:	25	10½	31 9	1 24.7
18	9	22 6	6 9.5	18	11	31 24	6 25.2
18	10	22 18	6 15.3	26	10	31 42	0 47.0
25	11	22 19	1 30.1	25	9½	31 47	1 20.6†
18	9½	22 46	6 11.5	26	10	31 49	0 46.7
25	10½	22 48	1 26.2	26	9	31 50	0 45.1
18	9½	23 16	6 13.1	25	9	31 55	1 13.9
18	10½	23 46	6 14.2	25	11½	32 3	1 26.7
25	9	23 49	1 18.5*	26	9	32 39	0 50.6
25	11	23 53	1 28.0	25	10	33 5	1 29.1
25	10	23 57	1 16.5	25	10	33 7	1 25.7
18	9	24 34	6 13.5	26	10	33 15	0 45.6
18	9½	25 3	6 23.4	25	10	33 17	1 25.0
18	10	25 29	6 15.0	18	9½	33 36	6 17.6
26	11½	25 33	1 18.6	18	9	33 41	6 24.9
18	9½	25 44	6 15.5	26	10	33 48	0 47.7
25	9½	26 12	1 22.0*	25	10	33 51	1 19.0
25	10½	26 21	1 22.1*	26	10½	33 56	0 43.6
18	9	11 26 22	+6 13.9	26	11	11 34 7	+0 45.9

* (4).

† 10 Mag. *s. p.*

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
18	8	11 34 13	+6 17.0	18	10	11 39 38	+6 11.0
25	10	34 27	1 12.5	18	10	39 38	6 9.7
26	9½	34 38	0 45.6	25	9	40 0	1 27.0
18	8	34 45	6 20.1*	18	9	40 1	6 13.7
26	8½	35 21	0 44.1	25	11½	40 1	1 24.8
25	11½	35 24	1 14.1	25	10	40 3	1 22.8
26	11	35 30	0 49.7	8	9½	40 12	0 5.0
25	10½	35 40	1 12.6	26	10	40 30	0 42.6*
25	10	35 40	1 17.2	26	10	40 35	0 42.5*
25	9½	35 42	+1 24.5	25	10	40 58	1 30.2
8	10	35 55	—0 1.7	25	11	41 5	+1 27.2
26	11	36 12	+0 46.5	8	11	41 11	—0 1.1
25	9	36 26	1 17.1	25	10	41 27	+1 25.9
26	11	36 33	0 38.1	25	10	41 47	1 25.2
25	10½	36 57	1 16.0	25	8½	41 49	1 26.7
26	8	37 5	0 44.8	25	9	42 6	1 28.5
8	9	37 20	+0 0.8	26	10	42 6	0 38.5
8	11	37 40	—0 3.3	26	9½	42 11	0 37.8
8	10½	37 41	+0 5.3	26	9½	42 21	0 34.6
8	10½	37 53	0 3.4	25	12	42 33	1 11.8:
25	9½	37 53	1 15.2	25	11½	43 14	+1 13.4
26	11	37 57	0 34.8	8	10	43 18	—0 7.2
8	10	38 6	0 1.7	25	10½	43 22	+1 9.0
25	11½	38 10	1 14.3	25	9½	43 23	1 16.8
25	9½	38 19	1 24.0	26	11	43 23	+0 34.4
8	9½	38 22	0 4.9	8	10½	43 35	—0 6.2
25	10½	38 31	1 23.2	26	10½	43 40	+0 38.9
26	8	38 36	0 39.6*	8	11	44 14	—0 11.6
25	9	38 51	+1 11.3	25	10	44 22	+1 22.9
8	9½	39 5	—0 7.0	25	11	44 22	1 24.7
8	9½	39 11	0 7.5	26	11	44 47	0 33.4
8	9½	39 23	—0 7.3	25	11	44 50	1 25.3
8	9½	39 33	+0 6.5	25	11	44 50	1 26.6
26	8½	39 36	0 40.5	8	11	45 18	0 11.4
18	9½	11 39 38	+6 19.8	8	9½	11 45 22	+0 4.3

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
25	10	11 45 26	+1 30.1	26	10½	11 51 32	+0 50.7
8	10	45 50	—0 7.3	25	11	51 41	1 26.9
26	9	45 55	+0 31.2	26	8½	51 41	0 40.2
26	10	46 2	0 46.0	8	9½	51 49	0 6.3
25	10½	46 10	1 26.0	26	10	52 15	0 33.2
25	12	46 12	1 27.1	25	10	52 25	1 29.1
25	10	46 33	1 26.9	26	11	52 31	0 33.8
26	9	46 37	+0 46.0	25	10	52 37	1 28.4
8	10	46 48	—0 7.7	26	11	53 0	0 45.4
8	11	46 49	—0 8.2	25	10	53 2	1 13.6
26	11	46 52	+0 47.7	26	11	53 12	0 34.7
25	11	47 3	1 28.3	25	10	53 14	1 13.3
26	10½	47 10	+0 49.6	8	9½	53 16	0 6.2
8	11	47 42	—0 4.2	8	11	53 23	0 8.3
8	9½	47 55	—0 7.5	26	11	53 24	0 49.4
26	8	47 58	+ 0 45.7	26	11½	53 29	+0 47.5
26	11½	48 12	0 35.6	8	9½	53 35	—0 6.7
8	8½	48 26	0 2.1	25	8	53 59	+1 27.5
25	10½	48 38	1 15.0	8	10	54 9	0 6.9
25	8	49 22	1 27.7	26	9	54 11	0 35.1
26	10½	49 27	0 38.1	26	9½	54 26	0 33.7
25	10½	49 35	+1 21.6::	26	9½	54 34	+0 32.1
8	9½	49 38	—0 11.7	8	10	54 57	—0 4.7
8	9	49 47	—0 6.9	8	11	55 13	—0 9.1
8	10	49 49	+0 4.1	25	11	55 16	+1 10.3
26	11	49 49	0 38.7	25	10	55 32	1 16.5
26	8½	49 58	0 39.4*	26	11	55 43	+0 42.8
25	11	50 15	1 13.0	8	10	55 56	—0 3.9
8	9½	50 42	0 6.4	26	11½	56 1	+0 43.0
26	9½	50 42	0 37.8	25	11½	56 3	1 18.4
25	10	50 46	+1 28.7	25	9	56 3	1 12.8
8	10	50 47	—0 3.7	25	9	56 6	1 11.4
8	9½	51 7	0 11.9	26	10	56 6	0 45.3
8	10	51 9	—0 3.9	25	10	56 31	+1 11.5
25	11½	11 51 31	+1 27.9	8	10½	11 56 43	—0 10.9

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
25	11	11 56 57	+1 9.1	25	9	12 1 30	+1 22.7
25	8	57 0	1 13.3	25	10	1 57	1 27.1
26	10½	57 4	0 32.2	8	11½	2 4	0 4.5
26	9	57 8	0 36.7	25	9½	2 23	+1 23.6
26	9	57 8	0 35.6	8	10½	2 35	—0 4.9:
8	10	57 14	0 6.7	8	9½	2 38	+0 6.0:
8	11	57 22	0 9.1	30	11	2 47	—3 29.8
8	11	57 34	0 4.4	25	10½	3 7	+1 11.0
25	9	57 35	1 26.7	30	11	3 8	—3 29.0
8	10½	57 41	0 1.3	25	9½	3 11	+1 22.1
26	10	57 44	+0 46.1	8	11	3 16	0 9.4
8	8½	57 49	—0 8.2	25	9½	3 16	+1 14.9
25	12	58 2	+1 27.2	30	9	3 32	—3 8.6
25	9½	58 7	1 28.5	30	11	3 46	—3 12.3
25	10	58 8	1 21.6	26	9½	4 6	+0 38.2
26	10	58 12	0 47.8	25	11	4 20	+1 12.7
26	8	58 27	0 50.7	8	10	4 22	—0 1.5
26	8½	58 43	0 43.6	8	11	4 28	—0 3.4
26	10½	59 4	0 34.1	26	11	4 31	+0 37.5
25	11	59 7	+1 28.8	26	8	4 35	0 42.4*
8	8½	59 10	—0 6.2	8	10½	4 39	+0 1.8
8	8½	59 11	+0 1.0*	30	9	4 45	—3 25.4
25	10½	59 28	1 28.3	8	10½	4 55	—0 3.4
26	10½	59 47	0 40.7*	26	10	4 58	+0 44.4
25	11½	11 59 49	1 27.2	30	11	4 58	—3 24.7
26	10	12 0 0	0 45.5	30	10	5 3	3 23.4
8	9½	0 16	0 10.6	8	10½	5 7	—0 4.6
8	10	0 34	0 12.7	25	10	5 8	+1 23.2
8	9½	0 36	0 13.0	25	10½	5 29	1 24.0
26	9	0 40	0 43.9	8	10	5 45	0 8.2
26	8	0 47	0 50.9	26	11	5 59	0 47.0
25	10½	0 51	1 17.7	26	11½	6 8	0 44.8
25	11	1 1	1 17.2	8	8	6 13	+0 11.6
25	9	1 3	1 24.9	8	10	6 27	—0 1.0
8	9	12 1 12	+0 4.4	26	10	12 6 28	+0 47.7

Days. Obs.	Mag.	α. h. m. s.	δ. ° ′	Days. Obs.	Mag.	α. h. m. s.	δ. ° ′
26	9	12 6 30	+0 42.6	26	9	12 11 11	+0 50.7
25	12	6 39	1 26.9	25	8	11 17	1 23.1
26	10	6 41	0 44.3	25	9½	11 19	+1 19.4
25	11½	6 51	1 27.1	30	11	11 35	—3 11.0
26	10½	6 54	+0 45.3	25	11	11 37	+1 31.0
8	10	7 15	—0 1.2	8	10	11 42	+0 9.2
8	8½	7 19	+0 10.6	30	11	12 0	—3 13.6
25	10	7 30	+1 10.3	26	9½	12 13	+0 53.2
30	9	7 40	—3 27.3	26	10	12 25	+0 53.2
26	9	7 43	+0 34.0	30	9½	12 27	—3 22.2
25	11	8 0	1 26.9	30	10	12 31	—3 16.6
25	11½	8 3	+1 27.7	8	10½	12 40	+0 1.4
30	10½	8 19	—3 21.7	30	10	12 43	—3 16.9
8	10	8 26	0 8.9	25	9	12 45	+1 25.0
30	10	8 30	3 19.2*	8	10½	12 50	0 1.4
30	9	8 30	—3 12.3	8	11	12 51	0 7.3
26	11	8 35	+0 48.8	26	9½	12 53	0 34.2
25	10	8 59	+1 33.0	25	9½	12 54	1 17.3
30	10	9 5	—3 13.7	26	9½	12 54	0 32.9
8	9½	9 14	—0 7.2	26	11½	12 56	+0 36.0
8	9½	9 20	+0 7.8	30	9½	13 1	—3 16.5
8	10½	9 37	0 7.3	26	9	13 13	+0 36.6
8	11	9 38	0 9.6	25	11	13 24	+1 26.2
25	9½	9 39	1 23.8	30	9	13 25	—3 14.6
26	9½	9 46	0 48.5	25	9½	13 37	+1 12.1
26	9½	9 50	0 46.5	30	10½	13 39	—3 20.5
26	10	10 5	+0 47.4	25	10	13 55	+1 31.0
30	10	10 21	—3 12.9	26	11	14 8	0 33.9
25	10	10 26	+1 19.8*	25	11	14 11	1 31.6
8	10½	10 27	—0 1.8	26	10	14 16	0 49.4
30	10	10 28	—3 16.9	8	9½	14 27	+0 4.3
25	11	10 36	+1 13.3	8	10½	14 29	—0 7.5
30	10½	10 40	—3 18.2	25	9½	14 37	+1 13.5
25	11½	10 51	+1 14.8	8	10	14 45	—0 4.4
26	9	12 11 10	+0 43.4	8	10	12 14 48	—0 8.0

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
25	11½	12 14 48	+1 12.3	26	10	12 19 21	+0 40.3†
26	9½	14 51	+0 46.2	30	9½	19 40	—3 24.2
30	10½	14 51	—3 17.5	8	11	20 24	+0 6.0
30	10	15 36	3 24.3	8	10½	20 32	—0 8.2
8	8½	15 39	—0 5.2	30	10½	20 37	3 25.4
26	10	15 39	+0 33.3	30	10	20 39	3 14.1
25	11½	15 40	+1 26.8	8	10	20 58	0 2.1
30	9	15 44	—3 8.2	30	11	20 59	3 17.2
25	10	15 51	+1 17.7	8	9½	21 21	0 4.4
30	10½	16 6	—3 25.7	30	11	21 52	3 13.8
26	11	16 22	+0 35.1	30	11	21 52	—3 13.2
26	10½	16 24	+0 37.0	8	9½	22 2	+0 10.6
30	10	16 33	—3 24.5	30	10½	22 4	—3 14.5
30	11	16 36	—3 14.0	8	10	22 13	—0 2.8
8	11	16 39	+0 9.8	8	9½	22 27	+0 1.2
8	10	16 40	0 8.0	30	9½	22 36	—3 13.0
25	9	16 55	1 16.2*	8	11	23 24	+0 4.9
25	10	16 56	+1 12.5	30	10½	23 38	—3 15.2
8	10½	16 57	—0 1.4	30	10½	23 50	—3 27.5
26	9½	17 0	+0 37.1	8	10	23 55	+0 8.8
30	11	17 13	—3 23.3	8	10½	24 24	—0 0.8
26	10½	17 14	+0 47.9	30	9½	24 59	3 12.3
30	9	17 22	—3 12.6	8	11	25 1	0 5.8
8	9½	17 25	+0 6.4	30	11	25 19	3 18.7
25	8	17 25	1 14.0	30	11½	25 21	—3 17.2
8	11	17 40	+0 7.5	8	10	25 58	+0 8.9
30	9½	18 10	—3 24.3	8	9½	26 25	—0 5.3
30	10	18 21	3 25.3	30	10	26 50	3 21.8†
30	11	18 26	3 29.9::	30	10	27 8	3 18.3
8	10½	18 52	0 5.9	30	8	27 39	—3 14.2
8	9	19 0	—0 5.7	8	10	27 46	+0 5.4
26	10	19 5	+0 39.9†	30	9	27 59	—3 13.2
25	10	19 8	+1 19.2	30	12	29 2	3 24.5
30	9	19 9	—3 19.7†	30	9	29 25	—3 15.2
30	10	12 19 12	—3 30.3	8	10	12 29 38	+0 7.9

* N. of double.

† (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
8	11	12 29 45	+0 11.4	25	10½	14 10 59	−15 13.8
8	11	29 54	+0 5.2	25	10	11 43	15 13.5
30	8	30 35	−3 8.6	25	10	12 47	15 15.1
30	10	30 52	3 18.9	25	10	12 48	15 10.2
30	10	31 1	3 30.3	25	10	12 59	15 11.2
30	10	31 5	3 33.0	25	10½	13 56	15 17.0
30	11	31 33	3 11.1	25	10½	14 22	15 26.0
30	10	31 46	3 10.1	25	9½	15 14	15 13.2
30	10½	32 3	3 30.1	25	8	15 36	15 17.1§
30	9	32 35	3 12.9	25	10	16 42	15 23.7
30	8½	33 44	3 28.0	25	10½	16 54	15 22.9
30	10	34 49	3 23.5	25	10½	21 25	15 26.9
30	10	35 0	3 21.7*	25	10½	21 44	15 23.4
30	11	35 4	3 16.3	25	10	21 52	15 23.4
30	11½	35 6	3 15.4	25	9	22 12	15 11.7
30	10½	35 24	3 25.5	25	10	23 1	15 11.3
30	11	36 52	3 28.6	25	10	23 12	15 12.4
30	9½	37 27	3 30.0	25	10½	24 0	15 12.5
30	9	37 32	3 17.8	25	10	24 24	15 14.6
30	9½	12 37 47	3 18.3	25	9½	24 38	15 8.0
25	11	14 9 2	15 10.8†	25	10	25 44	15 17.2
25	11	9 41	15 27.0	25	9½	25 55	15 16.1
25	11	9 55	15 10.5	25	10	14 26 35	−15 14.6
25	10	14 10 54	−15 13.3‡				

* (4). † S. of double. ‡ M. C. § 4 M. C.

APPROXIMATE MEAN PLACES, FOR JANUARY 1, 1850,

OF

404 STARS NEAR THE ECLIPTIC,

OBSERVED IN MAY, 1851, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
3	11	12 5 5	−3 4·9	3	11	12 20 8	−3 9·3
3	11½	6 6	2 54·2	3	9	21 5	3 9·7
3	10	6 12	2 59·9	3	10	21 41	3 7·4
3	10½	7 31	3 7·1	3	10	22 0	3 6·5
3	10	7 53	3 4·2	3	9	22 31	2 57·1
3	8	8 38	2 53·9	3	10½	22 43	2 57·9
3	9	8 40	2 51·7	3	10½	22 45	2 56·4
3	9½	9 13	2 57·0	3	7½	24 0	2 53·0
3	10½	10 11	3 6·8	3	11	24 4	2 58·9
3	10	10 57	2 56·6	3	11½	24 11	2 53·8
3	9½	11 29	2 57·2	3	11	24 58	2 51·5
3	10½	11 40	2 54·0	3	11	25 13	2 53·4
3	10	11 58	2 56·3	3	11½	26 6	3 2·8
3	10	12 0	2 54·8	3	10	26 26	3 4·0
3	9	13 9	3 9·5	3	8	26 33	2 51·7
3	11½	14 9	3 3·5	3	10½	27 27	2 55·8
3	8	14 31	2 56·7	3	Neb.	27 47	2 58·0*
3	10	15 14	3 1·2*	3	10½	27 53	2 59·1
3	10½	15 34	3 1·5*	3	10½	29 34	2 50·2
3	9	15 44	3 8·4	3	10	30 9	2 51·0
3	10	16 29	2 52·7	3	8	30 18	3 3·4
3	10	17 10	3 5·4	3	11½	31 13	2 51·6
3	10	17 27	2 55·7	3	10	31 37	2 51·1
3	10	17 31	3 2·6	3	10	32 18	3 5·5
3	11	18 59	2 58·6	3	11	32 32	2 52·5
3	8	18 59	3 7·1	3	10½	32 33	2 58·5
3	8	19 33	2 48·9	3	9½	32 36	2 56·0
3	11	19 44	3 0·9	3	9	32 49	2 51·8
3	9	20 0	2 56·8	3	9½	33 35	2 58·3
3	9	12 20 7	−3 8·8	3	11½	12 34 56	−2 54·4

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
3	11	12 35 3	−2 53·3	3	10½	12 52 43	−2 56.8
3	11½	35 20	2 52.2	3	11	52 47	3 6.1
3	10	35 44	2 52.3	3	10½	52 49	2 58.0
3	10	36 37	2 53.9	3	10	53 3	3 7.3
3	9½	36 45	2 55.9	3	9	53 54	2 51.6
3	9	36 48	2 58.4	3	11	54 7	2 57.8
3	9	37 57	2 59.2	3	12	54 9	2 58.0
3	11	38 8	2 59.0	3	10	54 18	3 11.0
3	12	38 43	2 58.2	3	10	54 31	3 11.3
3	9½	38 59	2 56.9	3	10	55 37	3 3.5
3	11	40 30	3 2.2	3	10	55 48	3 2.5
3	11	40 38	3 6.2	3	8	55 51	3 8.5
3	10	40 41	3 1.5	3	10	56 40	2 53.0
3	11	40 45	3 2.8	3	11	56 47	2 52.5
3	9	41 6	3 9.5	3	11	57 39	3 3.9
3	9½	41 51	3 11.3	3	11	57 42	3 7.4
3	9½	42 24	3 12.7	3	11	58 24	2 55.3
3	11	43 0	2 51.9	3	10	59 6	3 3.6
3	10½	43 3	2 50.3	3	10	59 29	3 3.6*
3	9½	43 45	3 4.9	3	9	12 59 58	2 54.9
3	9½	43 55	2 51.5	3	9½	13 0 2	2 51.9
3	11½	44 42	3 6.1	3	11	13 1 3	2 57.9
3	9½	44 42	3 8.1	8	10½	14 34 4	17 54.2
3	10½	45 23	3 6.4	8	10½	34 33	18 6.5
3	10	45 56	3 7.7	8	11	35 22	17 53.8
3	12	46 20	3 5.2	8	10	35 53	17 55.7
3	10	46 56	3 1.6	8	11	36 2	18 1.3
3	9½	47 17	3 5.1	8	11½	36 15	17 50.5
3	9½	47 47	3 2.5	8	10½	36 51	17 52.0
3	10	47 56	2 56.9	8	10½	37 23	17 48.6
3	12	50 51	3 4.6	8	10	37 30	18 3.3
3	8	51 11	3 7.4	8	10	37 41	17 50.7
3	11	51 48	3 6.7	8	10½	38 55	17 52.3
3	9½	51 51	3 7.4	8	11	38 57	17 51.9
3	9½	12 52 38	−3 4.5	8	9	14 38 58	−17 51.1

* L. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
8	9½	14 40 7	—17 54.6	8	10	14 58 31	—18 4.8
8	11	40 29	17 52.3	8	11	58 31	17 49.9
8	11½	41 32	18 3.7	8	11	58 41	17 51.7
8	8	42 9	18 0.4	8	11	14 59 58	18 6.3
8	9½	42 34	18 6.2	8	9	15 0 2	17 53.1
8	10½	42 50	18 5.3	8	10½	0 26	18 5.4
8	10	43 3	18 3.5	8	10½	0 46	18 10.5
8	8½	43 8	17 53.4*	8	8½	1 2	17 49.3
8	10	44 12	18 1.8	8	10	1 38	18 7.1
8	9	44 41	18 2.5	8	10	1 55	18 2.3
8	10	45 21	18 8.6	8	8½	2 29	17 59.9
8	11½	46 12	17 51.2	8	11½	3 10	17 57.2
8	11	47 12	17 56.6	8	11½	3 30	17 55.5
8	11	47 59	18 8.7	8	9½	4 19	18 1.2
8	11	48 3	18 0.1	8	8½	5 20	17 55.5
8	10½	48 19	18 2.2	8	9½	5 23	18 5.7
8	10½	48 42	17 49.8	8	10	7 25	18 9.4
8.	10	48 47	17 52.7	8	11½	7 38	17 54.9
8	11	48 51	17 55.5	8	8	7 49	18 4.1
8	9½	50 10	18 10.7	8	11	9 8	17 50.7
8	9½	50 11	17 57.9†	8	11	9 31	17 50.4
8	9½	50 19	18 8.2	8	10½	9 44	17 50.8
8	11	51 55	18 4.9	8	10	9 49	17 57.3
8	11	51 57	18 10.6	8	9	10 10	17 50.0
8	9½	52 14	17 50.8	8	9	10 59	17 46.9
8	11	53 49	18 4.2	8	9½	11 26	17 56.3
8	10	54 0	18 2.8	8	9½	11 58	17 59.1
8	9	54 17	17 50.9	8	9	12 25	17 55.4
8	10	55 28	18 7.6	8	8½	12 32	18 6.7
8	10½	56 1	18 2.6	8	10½	14 8	18 3.7
8	9½	56 27	17 59.8†	8	10½	14 10	17 54.6
8	10½	56 44	18 3.2	8	9½	14 51	18 9.4
8	9	56 52	18 2.3	8	9	15 43	17 54.0
8	10	57 57	18 8.8	8	9	16 19	17 50.4
8	11½	14 58 11	—18 2.6	8	11½	15 16 26	—18 0.0

* 9th Mag. S. *f.*

† (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
8	10	15 16 26	—18 4.8*	22	8½	15 35 32	—21 53.7
8	10	17 23	18 8.3	22	10	35 37	21 57.0
8	9½	17 34	18 3.3	22	10½	35 48	21 52.9
8	11	18 26	18 0.0†	8	10	36 23	18 0.5†
8	11	18 39	18 0.4	22	10½	36 29	21 59.6
8	11	18 49	18 3.8	8	9½	36 41	17 59.8†
8	11	18 57	18 1.2‡	22	10	36 50	21 53.9
8	9½	19 1	18 3.6	22	10	36 55	21 58.8
8	8½	20 10	18 11.7	22	8	37 8	22 6.9
8	10½	20 21	18 7.1	22	11	37 57	21 54.7
8	10½	20 44	17 51.2	8	8½	38 36	17 59.9
8	8½	21 25	17 54.9	8	10	39 0	18 5.3
8	11	21 56	17 57.8	8	10½	39 10	17 53.3
8	11	22 1	17 52.9	22	10½	39 19	21 52.0
8	10	22 9	17 59.8	22	9	39 20	21 53.0
8	8½	23 25	17 58.1	22	10	39 26	21 59.3§
8	10½	23 36	17 50.8	8	8½	39 46	17 58.1
8	10½	24 6	18 7.8	8	10	40 5	17 56.5
8	10	25 31	17 57.8	22	11	41 3	22 9.9
8	11	25 52	18 1.8:	22	9½	41 30	21 48.1
8	10½	26 3	18 5.0:	22	10	41 33	21 51.9
8	10½	27 34	18 7.9	8	9½	42 0	18 0.0†
8	10½	27 40	18 8.2	8	9	42 1	17 49.6
8	10½	28 42	18 0.4	22	9	42 10	21 54.7
8	10	29 8	18 5.6	22	10	42 56	22 2.0
8	8½	29 57	17 57.0†	8	11½	43 4	17 55.3
8	10½	30 20	18 2.2	8	11½	43 40	17 56.3
8	10½	30 48	18 0.4	22	10½	44 12	21 53.4
8	11	32 51	18 5.2	22	10½	44 39	21 52.7
8	10	33 54	18 5.2	8	10	45 6	18 4.7
8	8½	34 3	18 7.3	22	11½	45 14	21 55.1
8	9½	34 35	17 51.6	22	11	45 17	21 54.3
8	10	34 55	18 6.6	22	8½	45 23	21 54.3
22	11	35 6	21 52.8	8	10	46 9	18 3.7
8	10	15 35 28	—17 54.2	8	10½	15 46 15	—17 56.7

* N. *p.* of a close double. † (4). ‡ Close double. § 4 S. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
22	8½	15 46 19	—22 3.2	22	11	15 55 47	—22 3.7
22	11	46 20	22 5.3	22	11	55 48	22 6.4
8	11	46 26	18 5.0	8	10	55 55	17 58.4
22	11	46 27	22 10.2	8	11	56 18	18 8.7
22	11	46 39	22 6.7	22	8½	56 48	21 52.4
22	11	47 25	21 54.6	22	10	57 48	22 10.7
8	9	47 26	17 48.8	22	10	58 22	22 7.6
8	10	47 33	17 53.9	22	8½	58 29	22 3.4
8	11½	47 42	17 54.8	22	10½	58 47	22 4.4
8	8½	47 47	17 51.5	22	8½	15 59 36	22 0.1‡
22	10½	48 7	21 55.1	22	11	16 0 22	21 58.8
22	10½	48 16	22 7.4	22	8½	1 5	22 0.5‡
8	11½	48 48	17 50.0	22	9½	1 17	22 3.6
8	10½	48 52	17 50.6	22	9½	1 32	21 56.7
22	8	49 9	22 6.6*	22	8½	1 36	21 49.8
8	7	49 42	18 10.9	22	11	2 41	22 10.8
8	9½	49 45	18 2.3	22	9½	3 13	21 53.3
22	10½	50 25	22 6.1	22	11	3 19	22 7.0
22	9½	50 39	21 55.1	22	11	3 25	21 53.3
8	11	51 0	18 6.9†	22	9½	4 9	21 55.0
22	9	51 2	22 8.2	22	9	4 18	22 5.7
8	11½	51 7	17 56.6	22	9	5 4	22 3.1‡
22	9½	51 41	21 52.8	22	11	6 25	21 53.9
22	10½	52 26	21 54.2	21	11	6 44	22 7.1
8	11	52 30	18 1.5	22	8½	7 28	21 49.0†
22	10	52 42	21 54.0	22	10	7 35	21 53.3
22	11	52 42	21 53.6†	22	9	8 46	22 7.2
22	10½	53 50	22 3.6	30	8	33 51	26 10.0
22	10½	54 15	21 56.9	30	10	34 26	26 8.3
8	8½	54 18	18 4.9	30	11½	34 59	26 11.3
22	10½	54 23	21 55.1	30	10	35 31	26 7.1
8	7½	54 40	17 50.8	30	10	35 54	26 6.5
22	11	55 21	22 5.8	30	10	36 12	26 5.3
22	11	55 28	22 6.7	30	9½	36 31	26 2.6
22	11	15 55 38	—22 4.1	30	11	16 36 39	—25 58.1

* L. of double. † S. of double. ‡ (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
30	9½	16 37 17	−26 2.5*	30	9½	16 56 23	−26 8.9
30	9	37 30	25 59.3	30	10	56 28	26 2.9*
30	9½	38 31	25 54.2	30	9½	57 10	26 14.4
30	10	39 11	26 5.4	30	11½	58 16	26 5.2
30	9½	39 11	25 49.2	30	9½	58 26	26 6.6
30	11½	40 39	25 59.9	30	11	58 42	26 5.5
30	11	41 1	25 58.0	30	9	16 59 49	26 13.2
30	11½	41 5	25 57.5	30	10	17 0 6	26 8.3
30	11	41 30	25 54.8	30	10	1 6	26 10.7
30	9½	42 25	26 6.6	30	8	1 16	26 2.7‡
30	10½	42 42	25 54.6	30	9½	1 27	26 0.3*
30	9	43 2	25 54.7	30	11	2 19	26 0.8*
30	10	43 34	25 53.2	30	10½	3 40	26 6.7
30	10	44 0	25 57.5	30	9	4 1	25 58.8:
30	9½	44 22	25 59.0	30	9½	4 2	25 55.1
30	10	44 50	25 58.9	30	9½	4 3	25 56.4
30	9½	45 4	26 2.8	30	10	5 9	26 7.7
30	8	45 34	26 9.7†	30	11½	5 24	26 9.7
30	10	46 11	26 13.4	30	8½	13 4	26 3.5†
30	9½	47 1	25 54.1	30	10½	13 30	25 59.7
30	10½	47 25	25 55.1	30	11	13 38	25 56.7
30	10	47 46	25 54.7	30	8½	14 45	26 4.4
30	9½	48 5	25 49.4	30	11	14 46	26 7.2
30	9½	48 42	26 10.0	30	10	15 9	26 8.8
30	8	49 12	26 7.0	30	9½	16 12	26 0.1
30	8	50 11	26 8.2†	30	9½	16 25	26 5.8
30	10	50 48	25 52.5	30	10	17 56	26 13.5
30	10	50 58	25 54.9	30	10½	18 55	25 57.7
30	11½	55 8	25 54.9	30	10½	28 38	26 10.1
30	11½	55 10	25 53.5	30	10	28 42	26 9.8
30	8½	55 19	26 2.9†	30	10	30 39	26 8.2
30	11	16 56 5	−26 5.5	30	10	17 31 17	−26 5.2

* (4). † M. C. ‡ 4 M. C.

Notes.—8th—Strong moonlight, and there appeared to be haze.

22nd—Stopped by clouds.

30th—The interruptions were caused by the eye-glass being dewed, and stopping to observe a few stars with the meridian circle.

APPROXIMATE MEAN PLACES, FOR JANUARY 1, 1850,

OF

132 STARS NEAR THE ECLIPTIC,

OBSERVED IN JUNE, 1851, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
26	8½	17 53 44	—24 3.7*	26	11	18 7 36	—23 56.5
26	10	53 28	23 56.0	26	9½	7 58	24 1.4*
26	9½	54 29	23 56.9	26	9½	8 20	23 56.5
26	10	55 4	24 5.5	26	10	9 33	23 55.7
26	8	55 22	24 9.7	26	11	10 10	24 5.1
26	10	56 46	23 54.9	26	10	10 10	23 55.5
26	10	57 12	24 4.7	26	10	10 19	24 3.7
26	8½	57 19	24 10.0	26	9½	11 10	24 9.9
26	10	58 31	23 55.2	26	9½	11 32	23 53.6
26	10	58 38	24 0.8	26	9	11 42	24 0.0
26	10	58 58	24 4.8	26	10	11 57	23 54.5
26	9½	59 24	24 9.8	26	10	13 6	23 54.6
26	10	17 59 54	24 10.8	26	10½	13 19	24 9.5
26	7	18 0 11	23 59.4	26	10	13 30	24 6.6
26	9	0 30	23 56.7	26	9	14 11	24 5.3
26	10	0 34	23 56.4	26	10½	15 11	23 54.2
26	9	2 30	24 5.1	26	10	15 27	24 10.8
26	10	2 34	23 54.2	26	10	16 41	24 7.9
26	8½	2 34	24 1.0	26	11	17 35	23 55.8
26	8½	2 54	24 7.7	26	9½	18 0	24 6.1
26	9½	3 51	23 54.5	26	10	18 5	24 7.6
26	10	4 4	23 53.7	26	8	20 6	23 56.7
26	10	4 41	23 58.1	26	9½	20 14	23 58.6
26	11	4 56	24 8.3	26	8	20 23	23 55.6
26	9½	4 59	24 12.0	26	10	20 25	23 56.8
26	8	5 55	23 56.5	26	8	21 29	23 58.8
26	8	6 12	23 59.9	26	9	22 34	24 6.4
26	10	6 12	24 8.5	26	9½	22 50	23 59.2
26	9½	6 29	24 8.1	26	9	23 5	23 54.2
26	9	18 7 34	—24 3.3	26	9	18 23 42	—23 58.9

*(4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
26	10	18 24 6	—24 5.3	26	10	18 44 16	—23 58.0
26	9½	24 26	24 9.0	26	8	44 18	24 10.2
26	10	25 58	24 13.5	26	10	44 25	23 58.3
26	9½	26 27	24 9.0	26	9	45 22	23 54.1
26	10	26 35	23 55.1	26	10	45 45	24 8.1
26	10	27 2	23 53.3	26	10	46 0	24 5.5
26	11	27 18	24 0.3*	26	9½	46 2	24 12.0
26	9	27 32	24 10.9	26	8½	46 51	23 56.3
26	8	27 39	23 52.8	26	9	47 16	24 4.2†
26	10	28 37	24 10.1	26	9	48 20	24 3.8
26	9	28 53	24 10.2	26	10	48 42	24 1.3
26	9½	29 22	23 55.7	26	8	50 35	23 54.4
26	10	29 32	23 55.5	26	10	52 2	24 7.8
26	9½	29 52	23 57.4	26	10	52 5	24 4.3
26	10	30 55	24 10.9	26	10	52 7	24 7.5
26	11	30 57	24 9.6	26	9½	52 19	24 7.3
26	10	31 22	24 13.5	26	7	53 8	23 54.2
26	9	31 29	24 13.9	26	9½	53 52	24 3.6†
26	9½	31 58	24 10.6	26	9	54 16	23 53.9
26	9	31 58	24 11.1	26	8	54 40	24 8.9
26	9	33 1	24 9.9	26	10	56 5	23 57.0
26	10½	35 20	23 59.3	26	8½	56 10	23 56.1
26	9½	35 25	23 58.5	26	10	57 17	23 54.1
26	10	35 39	23 54.1	26	9½	57 39	23 56.2
26	8	37 14	24 3.6†	26	9	58 7	24 5.5
26	11	38 9	24 0.2	26	10	58 14	24 5.8
26	10	38 25	24 6.4	26	10	58 15	24 6.2
26	10	39 18	24 11.4	26	9½	59 28	24 8.2
26	9½	39 32	24 6.0	26	10	59 34	23 55.2
26	10	39 44	24 12.8	26	9	18 59 52	23 58.3
26	10	40 3	24 9.3	26	10	19 0 43	24 12.8
26	9½	40 14	24 7.5	26	10	0 56	24 10.4
26	10	40 35	23 59.5	26	8½	2 22	24 8.2
26	8	43 10	24 10.7	26	7	2 58	23 59.0:
26	10	43 46	24 6.7	26	9½	3 7	24 7.7:
26	10	18 44 8	—24 4.6	26	9½	19 3 11	—24 9.4

* One of a cluster.

† (4).

Note.—Strong twilight.

APPROXIMATE MEAN PLACES FOR JANUARY 1, 1850,

OF

374 STARS NEAR THE ECLIPTIC,

OBSERVED IN JULY, 1851, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
3	7	17 51 37	—24 46.4	2	9½	18 2 46	—23 52.3
3	8	52 7	24 37.1	3	8½	3 33	24 40.3
3	10	52 13	24 44.5	3	8½	3 35	24 30.9
3	11	52 17	24 45.6	3	10½	3 57	24 34.1
3	10	52 20	24 48.0	3	8	4 21	24 37.6
3	10	53 22	24 35.1	3	10½	4 55	24 31.6
3	9½	53 29	24 33.0	3	9	5 23	24 36.1
3	10	53 37	24 38.7	3	9½	5 47	24 32.5
3	10	53 39	24 32.5	3	9½	6 45	24 34.3
3	10	53 56	24 37.5	3	9½	7 18	24 36.5
3	10	55 15	24 42.5	3	8½	7 44	24 43.4
3	9½	55 44	24 42.7	3	10	7 44	24 41.3
3	7	55 45	24 40.9*	3	10	8 55	24 38.1
3	10	55 48	24 43.8	3	10	9 25	24 36.3
3	9½	57 6	24 46.0	3	9	9 48	24 32.7
3	10	57 15	24 47.1	3	9½	10 15	24 40.8
3	10	58 10	24 45.8	3	10½	10 25	24 40.6
3	10	58 47	24 36.6	3	9	10 48	24 39.3
3	10½	59 48	24 37.0	2	9½	12 23	24 3.0
3	10½	17 59 53	24 33.5	3	11	12 33	24 42.0†
3	10	18 0 4	24 42.8	3	10½	12 57	24 46.5
3	9½	0 12	24 32.6	3	10	13 4	24 41.7
3	8	0 20	24 41.0	3	9	14 29	24 41.6
3	8	0 28	24 44.0	3	9	14 47	24 50.3
2	10	0 48	24 7.5	3	8	15 19	24 27.5
2	9½	1 23	23 56.5	3	10	15 58	24 39.9
3	10	1 51	24 44.3	3	10	16 4	24 38.5
3	10½	2 30	24 41.7	3	11	16 6	24 33.1
2	10	2 33	24 4.9	3	9½	16 27	24 29.5
3	10½	18 2 38	—24 42.3	2	9½	18 18 12	—23 51.6

* (4).

† Double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
3	11	18 18 17	—24 31.2	3	9	18 33 14	—24 45.9
2	10	19 18	23 52.2	3	9½	34 15	24 35.2
3	8	20 5	24 32.5	3	8½	34 29	24 38.7*
3	10	20 44	24 48.0	2	10	35 3	24 4.2
3	10	21 7	24 46.8	2	10	36 6	23 55.1
3	10	21 29	24 34.3	3	10	36 16	24 50.3
3	9½	22 3	24 45.9:	2	9½	36 21	23 57.8
3	11	22 8	24 43.5	3	10	37 1	24 34.1
3	10	22 25	24 49.7	3	10	37 5	24 31.3
3	10	22 43	24 42.4	3	10	37 57	24 47.1
3	8	22 55	24 49.8	3	9½	38 19	24 34.3
3	10	23 38	24 28.1	3	8	38 21	24 28.6
2	10	24 3	24 6.0	3	9½	38 52	24 31.8
3	9½	25 46	24 47.8	3	9	39 4	24 43.1
3	9½	26 2	24 33.7	3	11	39 30	24 31.7
3	9½	26 24	24 32.5	3	9½	40 19	24 33.7
3	8½	26 44	24 35.9	3	11	41 35	24 45.1
3	8	26 56	24 33.0	3	9	41 59	24 33.3
3	8½	27 12	24 45.6	3	11	42 0	24 42.4
2	10	27 44	23 58.5	3	10	42 12	24 41.9
3	10½	28 7	24 33.8	3	7½	42 24	24 31.6
3	9½	28 11	24 35.9	3	11	43 42	24 36.3
3	10½	28 20	24 38.1	3	11	43 59	24 41.3
2	10½	28 52	23 52.1	3	8	44 8	24 32.6
3	10	28 59	24 48.3	3	9	44 11	24 45.6
2	8	29 2	23 50.4	3	10½	45 27	24 33.2
3	10½	29 14	24 45.8	3	9½	45 40	24 33.8
3	11	30 15	24 30.5	3	9½	46 10	24 28.6
3	9½	30 57	24 30.3	3	10	46 31	24 31.3
3	9½	31 55	24 36.5	3	7	47 32	24 48.5
3	9½	32 6	24 44.5	3	9½	47 44	24 31.6
2	9½	32 8	23 52.9	3	9½	47 46	24 32.7
2	9½	32 16	24 3.3	2	9½	48 1	24 3.3
3	9½	32 24	24 30.5	2	8½	48 7	23 58.8
3	8½	18 33 7	—24 51.3	2	9	18 48 10	—24 1.0

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
3	10	18 48 39	—24 46.0	18	10	18 55 36	—18 8.0
3	9½	48 56	24 47.6	3	11	56 3	24 44.1
2	9½	49 31	23 59.3	3	9½	56 37	24 43.5
18	8½	49 33	18 7.5	18	10½	56 43	18 8.2
3	11	49 44	24 49.1	18	10½	57 16	17 50.3
3	10	50 5	24 51.1	3	10	57 25	24 51.6
18	8	50 5	18 8.1	18	9½	57 27	17 50.8
18	11½	50 17	18 3.8	3	11	57 33	24 51.5
3	8	50 44	24 35.8	18	9	58 10	18 9.1
18	8	50 44	18 4.7	18	8	58 31	18 5.0
3	9	51 9	24 35.2	18	9½	58 36	18 5.4
18	8½	51 27	18 8.0	18	8	58 45	17 51.8
18	10	51 33	18 2.0*	3	11	59 5	24 34.4
18	9½	51 40	17 54.2	18	8	59 21	17 53.8
3	8	51 48	24 51.4	21	9	59 28	20 30.3
18	9½	52 7	18 1.0	3	8½	59 38	24 38.6†
18	11	52 21	17 50.2	18	11½	18 59 56	18 3.4
2	10	52 40	23 55.4	3	11	19 0 0	24 47.4
2	9½	52 45	23 55.9	18	11	0 0	18 4.4
3	10½	52 51	24 46.1	18	10	0 11	18 9.1
3	10	52 55	24 44.4	3	9½	0 13	24 39.4
3	9½	53 2	24 46.9	21	8½	0 13	20 25.0
18	10	53 15	18 0.3†	3	9½	0 16	24 47.7
18	10	53 22	17 57.1	2	10	0 23	24 4.6
18	11½	53 23	18 6.3	3	9½	0 46	24 49.7
3	7	53 34	24 34.3	21	7	0 48	20 16.6
18	9½	54 15	17 55.4	18	8½	1 7	18 8.1
3	10½	54 18	24 44.7	18	9½	1 11	17 56.9
3	11	54 20	24 43.1	18	11	1 15	17 56.1
3	10½	54 21	24 49.2	18	10	1 17	17 51.2
18	8	54 28	17 51.1	18	8½	1 58	17 58.0
3	8½	54 33	24 46.7	3	10½	2 12	24 47.4
3	10	54 57	24 45.3	18	10½	2 13	18 5.3
18	11	55 3	17 50.4	21	10	2 14	20 16.0
2	10	18 55 31	—24 6.8	3	10½	19 2 20	—24 37.0

* S. of double.

† (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
3	8½	19 2 24	—24 41.1*	3	10	19 8 45	—24 49.6
18	9½	2 24	18 3.7	18	8½	8 49	18 5.0
21	10	2 49	20 13.7	3	10	8 55	24 39.0
21	8½	3 6	20 29.4	2	9½	9 2	23 51.7
2	9½	3 8	23 56.0	18	9½	9 9	18 8.5
2	9½	3 11	23 51.9	18	9½	9 17	17 57.4
18	9	3 14	17 51.0	2	8	9 38	24 9.0
3	8½	3 18	24 33.3	21	9	9 49	20 33.2:
3	9½	3 29	24 40.0	3	8½	10 10	24 39.1*
18	9	3 31	17 56.5	18	9	10 12	18 1.0*
18	9½	3 31	17 49.7	2	7	10 13	23 49.4
2	8½	4 0	23 57.1	3	9½	11 0	24 38.9*
21	8	4 11	20 26.2†	2	7½	11 41	23 59.2*
18	11	4 14	18 5.1	18	11	11 47	17 55.6
3	9½	4 26	24 46.2	2	8	11 49	24 6.6
18	10½	4 26	18 6.5	18	11½	11 55	18 2.2
21	11	4 28	20 26.2	18	11½	11 57	18 5.1
18	10	4 33	18 7.8	2	7	12 0	23 53.5
18	9½	5 10	17 47.6	18	10	12 13	18 6.4
21	9½	5 12	20 22.4	2	10	12 16	23 53.8
18	8½	5 13	17 55.1	18	10	12 19	18 5.7
2	10	5 29	24 4.0	3	8	12 31	24 44.8
18	10	5 46	18 1.1	3	8½	12 44	24 42.0
2	9½	6 21	24 2.5	3	11	12 55	24 47.4
2	9½	6 29	23 57.0	2	9	13 35	23 51.5
3	10	6 35	24 47.4	18	11½	14 1	18 2.6
2	9½	6 45	24 6.1	18	11½	14 3	18 3.5
3	9½	6 55	24 47.0	18	11	14 22	18 3.2
3	10	7 3	24 49.6	18	11	14 30	18 4.5
18	11	7 32	18 2.8	2	10	14 34	23 51.9
18	9½	7 37	17 52.6	18	10½	14 37	18 6.2
18	9½	7 40	17 50.6	18	9	14 58	17 52.8
18	8½	7 59	17 54.8	3	9½	15 0	24 33.4
3	8½	8 11	24 45.9	21	10½	15 27	20 24.5
2	8½	19 8 14	—24 6.3	18	9	19 15 32	—18 4.2

* (4). † M.C.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
3	10	19 16 6	−24 36.9*	21	11	19 27 4	−20 27.7
18	9½	16 8	17 54.5	18	9	27 58	17 53.4
18	9	16 21	17 58.6	18	10	28 5	17 57.4
18	8	16 40	17 55.7†	18	10½	28 43	17 53.3
18	10	17 27	17 53.3	18	10½	29 6	17 53.1
18	10	17 43	17 57.1	18	9½	29 13	17 52.7
2	9½	18 32	24 4.0	18	10	29 25	17 53.4
2	10	18 36	24 1.7	21	11	29 29	20 11.4
18	9½	18 38	17 55.3	18	8½	30 5	17 50.4
18	10	18 52	18 6.7‡	18	10	30 47	17 55.7
21	10	19 38	20 19.0	18	10	31 41	17 56.4
21	10	19 41	20 19.3§	18	10	32 7	17 53.0
18	9	19 47	18 1.3	18	11	32 16	18 6.0
18	9½	19 48	18 5.6	18	9½	33 2	18 10.9
18	8½	20 24	17 52.2	21	10	33 22	20 11.4
18	9	20 40	18 0.4	18	9	34 15	18 0.4§
18	11½	21 8	17 51.2	18	10	34 20	18 11.3
18	11	21 21	17 52.6	18	11	34 22	18 5.4
18	9	21 23	17 51.8	21	10	35 6	20 29.7
21	11	21 48	20 26.9	21	10	35 7	20 30.2
18	10	22 18	17 53.3	18	10	35 45	18 3.8
21	10½	22 24	20 27.7	18	10	35 54	17 56.7
21	10½	22 35	20 27.6	18	9½	36 12	18 0.7
18	11	22 36	17 52.3	18	10	36 20	17 53.8
18	11	22 42	17 53.9	21	10½	36 22	20 17.9
18	9	22 45	17 58.9§	21	10½	36 29	20 27.6
18	10½	23 32	18 7.2	21	8	37 52	20 12.0
18	10	23 44	18 9.3	18	10	38 17	17 54.9
18	9½	24 45	18 3.2	18	10½	38 25	18 6.9
21	10½	25 5	20 19.2	21	8½	38 35	20 14.3
18	10	25 20	17 57.5§	18	10½	38 44	18 6.6
18	9½	25 24	18 0.7§	18	10	38 58	18 8.6
18	10	26 24	18 10.5	18	7	39 22	17 50.6
18	9½	26 49	18 10.7	21	11	39 32	20 13.3
18	11	19 27 4	−18 4.0	21	11	19 39 34	−20 12.8

* S. *p.* of double. † Several small stars round this. ‡ Double. § (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
21	10	19 39 48	—20 15.0	18	9	19 48 27	—17 52.5
18	10	40 4	18 9.0	21	8	48 41	20 10.2
18	9½	41 0	18 8.1	21	8	48 53	20 17.5:
18	9½	41 32	17 52.9	18	10	49 2	17 51.1
18	9½	42 18	17 52.0	18	10	49 10	17 54.9
18	10	43 14	17 55.3	18	9½	49 26	17 54.3
18	9½	43 28	18 2.4	21	8	50 24	20 12.6†
21	8	43 40	20 15.5	18	9½	50 57	18 1.6‡
18	8½	43 59	18 1.0*	18	10	52 56	18 3.7
18	9½	44 4	18 7.2	18	10	53 26	18 2.5
21	9½	44 47	20 24.5	18	10	55 28	18 5.1
18	10	45 21	18 5.6	18	9½	55 45	17 52.6
18	9½	45 23	17 49.7	18	10	57 48	17 54.1
18	8	47 0	17 56.9	18	9	58 9	18 1.3*
21	11	47 13	20 19.5	18	9½	59 2	18 7.9
18	10	47 14	17 53.6	18	9½	19 59 54	17 47.9
18	8	19 48 9	—18 8.2	18	10	20 1 57	—17 55.9

* (4). † L. of double. ‡ (4) L. *p.* of double.

NOTES.—2nd—Low haze, in addition to the twilight, rendered the stars difficult to be seen, the magnitudes must, therefore, be very uncertain.

18th—Moon troublesome.

21st—Stopped by fog.

APPROXIMATE MEAN PLACES, FOR JANUARY 1, 1850,

OF

1,205 STARS NEAR THE ECLIPTIC,

OBSERVED IN AUGUST, 1851, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
4	10½	18 52 34	—25 9.6	4	9½	19 9 15	—25 4.9
4	10½	52 50	25 7.4	4	8½	9 20	24 53.0
4	10	53 28	25 9.5	4	9½	9 41	24 57.9
4	10½	53 48	25 6.9	4	8	11 9	24 54.0
4	9	54 6	24 57.6	4	10	11 29	24 58.6
4	9½	54 37	24 59.7	4	10	11 32	25 1.2
4	8	55 54	25 8.1	4	9½	12 17	25 6.0
4	11	57 24	25 4.6	4	10½	12 38	25 8.7
4	11	57 43	24 59.9	4	10	13 5	25 5.9
4	8	57 56	25 6.5	6	11	13 21	24 49.3
4	10½	18 59 48	24 57.1	4	9½	13 22	24 54.2
4	9	19 0 40	25 0.3	4	9½	13 30	24 59.1
4	9	0 45	25 1.2	4	9½	13 52	25 1.5
4	9½	1 40	24 56.5	4	10	14 4	25 9.2
4	9½	2 30	25 14.2	6	8	14 17	24 30.1
4	8½	2 31	24 57.0	6	10	14 24	24 39.7
4	9½	2 58	25 7.7	4	10	15 25	25 4.7
4	10	3 19	25 10.0	4	11	15 30	25 4.5
4	9	3 30	25 3.3	4	11	15 31	25 8.8
4	8½	3 35	25 9.1	6	10	15 59	24 51.1
4	9½	4 6	25 0.4	4	9½	18 0	24 53.9
4	9½	4 22	24 59.5	6	10½	18 15	24 41.9
4	10	5 55	25 9.7	6	10½	18 18	24 46.8
4	9½	6 49	25 4.0	6	10½	18 19	24 34.7
4	11	7 1	25 4.2	6	10	18 53	24 50.3
4	9½	7 57	24 58.6	6	10	19 30	24 39.3
4	10	8 0	25 12.8	4	8½	19 35	24 57.3
4	10	8 38	24 54.0	6	8	20 11	24 37.6
4	9½	8 43	24 57.9	6	9	20 15	24 33.9
4	9½	19 8 48	—24 54.5	4	10	19 20 26	—25 8.8

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
6	9½	19 20 45	—24 37.9	4	9½	19 29 3	—24 56.1
4	11	21 4	24 58.6	4	9	29 3	24 52.6
4 6	8½	21 30	24 53.2	5	10½	29 12	17 32.9
6	9½	21 29	24 44.3	5	10½	29 16	17 32.1
6	10	22 16	24 36.7	6	9½	29 18	24 48.9
4	8½	22 43	25 14.7	4	10	29 33	24 53.5
6	8	22 48	24 39.1	6	8	30 11	24 30.8
4	10½	23 4	25 7.8	4	10	30 17	24 55.6
4	8½	23 37	25 14.2	5	7	30 19	17 22.3
4	8½	23 42	25 15.2	5	9	30 20	17 11.3
6	9	24 2	24 34.7	4	9	30 23	24 53.1
4	10	24 33	25 9.8	4	9	30 30	24 54.8:
5	9	24 45	17 22.4	4	8½	30 47	24 57.6
6	8½	24 49	24 35.4	6	9	30 53	24 35.5
5	9½	25 5	17 18.5	6	9	30 55	24 36.3
6	10½	25 9	24 49.1	4	8½	31 5	25 9.5
4	8	25 14	24 56.7	5	10	31 12	17 19.2
4	10½	25 18	24 53.9	5	10½	31 18	17 23.5
6	10½	25 20	24 48.9	5	10½	31 19	17 23.4
6	8	25 41	24 49.0	6	8	31 35	24 50.1
4	10	25 53	24 58.1	5	10	31 45	17 15.3
5	10	25 58	17 21.6	6	8½	31 45	24 40.2
5	11	25 59	17 28.4	5	9½	31 57	17 17.0
4	10½	26 16	24 57.9	4	11	31 58	25 10.3
6	8	26 20	24 51.7	6	11	32 29	24 39.9
6	8	26 50	24 41.9	5	9½	32 37	17 27.1
4	9	27 9	24 58.2	4	10½	32 47	25 11.0
5	10	27 19	17 28.1	5	10	32 56	17 22.0
5	10	27 29	17 8.7	6	8½	32 58	24 44.3*
5	10	27 50	17 11.7	5	10	33 9	17 17.2
4	10	28 3	25 9.9	5	10½	33 24	17 22.7
4	9½	28 39	24 53.3	4	8½	33 32	24 52.8
6	9½	28 39	24 36.1	5	11	33 42	17 14.8
5	7	28 40	17 30.0	1	9	33 53	23 22.1
6	10	19 28 51	—24 49.2	5	10	19 34 44	—17 14.6

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
4	11	19 34 45	—25 4.0	1	10½	19 38 56	—23 28.3
5	11	34 53	17 17.4	6	8½	38 59	24 47.7
4	10½	34 58	25 9.5	5	7	39 3	17 25.9
4	11	35 2	25 11.8	1	8½	39 4	23 18.1
4	11	35 3	25 4.9	4	11	39 7	25 9.2
5	9½	35 6	17 18.8*	5	10	39 20	17 29.3
1	10½	35 23	23 28.5	6	9½	40 0	24 31.5
6	9½	35 30	24 52.5	4	10	40 15	25 11.1
6	8	35 32	24 45.7	6	10	40 19	24 38.3
4	10	36 16	24 57.3	1	9½	40 35	23 16.4
1	8½	36 26	23 15.2	1	10	40 46	23 25.8
4	10½	36 26	24 54.4	5	10	40 46	17 27.1
5	10½	36 30	17 26.6	1	9	40 53	23 21.4*
5	7½	36 38	17 26.2†	5	11	41 1	17 19.7*
6	11	36 38	24 50.5	4	10½	41 7	24 54.8
5	8	36 39	17 15.9	5	10½	41 8	17 23.2
1	8½	36 43	23 12.9	1	10½	41 9	23 14.0
1	8	36 45	23 23.0*	4	10½	41 29	24 56.7
4	10½	36 56	25 6.8	6	8	41 35	24 49.4
1	8½	37 10	23 22.8*	5	10½	41 44	17 18.0
4	10	37 11	24 57.3:	4	10½	41 58	24 55.2
1	9	37 20	23 28.1	6	9½	42 2	24 32.4
5	10½	37 20	17 10.0	6	10	42 6	24 49.2
6	10½	37 30	24 50.4	4	10½	42 7	24 59.2
6	10½	37 30	24 54.0	5	10½	42 15	17 25.0
4	10½	37 32	25 7.4:	4	9	42 20	25 10.1
5	11	37 37	17 13.2	4	9½	42 25	25 9.3
4	10	37 45	25 9.0	5	9½	42 52	17 12.3
5	11	38 4	17 14.5	5	9½	43 0	17 16.3
5	11	38 5	17 11.2	6	7	43 1	24 49.0
1	9½	38 9	23 27.1	4	10	43 22	25 8.5
6	8	38 17	24 46.4	1	8	43 25	23 8.7
5	7	38 32	17 26.5	6	10	43 30	24 38.3
6	9	38 43	24 42.0	5	7	43 50	17 15.8†
4	9½	19 38 48	—25 9.3	1	10	19 44 0	—23 32.4‡

* (4). † M. C. ‡ S. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
5	8	19 44 17	—17 24.7	6	7½	19 48 0	—24 43.8
5	9	44 18	17 22.7	4	8½	48 18	25 11.8
6	10½	44 27	24 33.6	6	10	48 22	24 49.0
1	10	44 39	23 27.4	4	10	48 30	25 12.9
5	11	44 47	17 14.6	1	8	48 45	23 19.8
4	10	44 48	24 59.2	5	9	48 52	17 28.7
6	10	44 49	24 33.5	6	10	48 54	24 45.3
5	10	44 52	17 14.2	4 6	8	48 57	24 49.9
1	10	44 57	23 24.2	5	10	48 58	17 26.4
5	10½	44 57	17 18.8	5	10	49 2	17 25.7
4	9½	45 3	24 52.8	4	10	49 7	24 53.7†
4	8½	45 8	24 53.5	1	10	49 22	23 21.5
5	10	45 11	17 17.6	1	11	49 27	23 13.6
5	11	45 25	17 15.9	1	11	49 36	23 14.7
1	9	45 27	23 14.0	1	10	49 48	23 15.2
1	9½	45 33	23 15.1	6	10	49 48	24 45.7
6	9	45 36	24 38.1	5	9½	49 53	17 27.2
4	10	45 47	25 8.6	5	10	50 17	17 23.1
4	10	45 49	25 10.8	6	10	50 20	24 34.2
6	10	45 52	24 37.1	5	10	50 24	17 27.7
4	10½	45 56	24 55.5	4 6	8	50 32	24 50.7
6	9	46 5	24 47.7	4	9	50 40	24 57.5
4	10	46 15	25 8.5	4	9	50 46	24 59.3
5	7½	46 19	17 26.3*	1	10	50 55	23 13.8
1	9	46 44	23 12.7	5	9	50 56	17 27.7
1	9½	46 47	23 19.0	1	10	51 9	23 13.9
1	9½	46 47	23 16.5	1	10	51 11	23 13.4
4	9½	47 9	25 7.3	5	10½	51 25	17 25.6
6	9½	47 14	24 34.1	6	8	51 48	24 35.4*
6	10½	47 15	24 35.9	4	9½	51 50	25 0.4
5	9	47 21	17 30.0	1	10	51 52	23 14.4
5	11	47 36	17 24.8	5	10	51 55	17 28.5
4	10½	47 38	25 7.2	1	10½	52 0	23 14.5
1	10	47 41	23 22.1	4	10	52 5	25 7.5
1	8	19 47 53	—23 24.2	5	9	19 52 6	—17 30.0

* M. C.

† N. *f.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
4	10	19 52 7	—25 6.6	4	9½	19 56 51	—25 0.0
4	9½	52 30	25 15.2	1	9½	56 53	23 17.3
6	9	52 40	24 48.9	6	10	56 56	24 41.3
5	10	52 48	17 27.4	1	9½	56 58	23 29.2†
5	9	53 4	17 13.7	4	10	57 8	25 1.6
6	9	53 5	24 33.2	1	9½	57 13	23 23.0
1	11	53 11	23 26.0	5	8	57 15	17 11.7
4	10	53 18	24 56.9	6	10	57 22	24 41.3
4	10	53 20	24 55.6	5	10	58 5	17 28.2
1	9½	53 22	23 23.3	4	8	58 6	25 11.8
1	9½	53 39	23 18.1	1	9½	58 29	23 13.4
1	8	53 43	23 14.7	1	10	58 41	23 18.3
4	10	53 44	24 58.4	1	10	58 44	23 18.9
6	9	53 51	24 49.8	5	7½	58 53	17 23.3
4	10	54 0	25 0.4	5	7½	59 9	17 25.5
5	10	54 20	17 32.3	1	10	59 11	23 19.8
4	9	54 34	24 59.4	4	8½	59 20	25 1.0‡
6	11	54 41	24 47.4	1	10	59 24	23 16.1§
1	10	54 42	23 13.2	5	8	59 26	17 15.0
1	10½	54 45	23 29.6	4	8½	59 30	25 7.6
6	10	54 48	24 49.5	5	9½	59 36	17 24.8
6	10	54 54	24 50.7:	6	9½	59 44	24 34.1
6	8	55 2	24 46.1*	5	10½	19 59 54	17 18.6
5	11	55 31	17 27.5	4	9½	20 0 0	24 59.9
1	–	55 39	23 23.0:	1	9½	0 4	23 22.4
1	8	55 43	23 11.4	5	10	0 11	17 13.6
1	10	55 45	23 15.7	4	9½	0 17	25 0.2
5	10	55 51	17 22.2	1	8	0 26	23 18.0
5	10	56 0	17 32.6	6	11	0 32	24 41.1
6	10	56 0	24 42.1	5	10½	0 35	17 25.0
5	11	56 3	17 22.4	1	11	0 41	23 19.3
1	9½	56 14	23 16.0	4	9½	1 4	25 10.9
4	11	56 30	24 59.9	5	9	1 31	17 12.5
6	10	56 37	24 44.7	5	9	1 49	17 18.9
5	6	19 56 40	—17 18.5	5	10	20 1 51	—17 26.6

* M. C. † N. *f.* of double. ‡ (4). § Double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
1	9½	20 2 3	—23 14.6	1	10	20 7 58	—23 27.0
1	10	2 10	23 12.5	1	9½	8 6	23 24.0
4	10	2 15	24 56.1	5	11	8 9	17 16.7
4	8½	2 16	25 0.2*	1	9	8 12	23 26.0
6	10	2 26	24 34.7	5	11	8 23	17 24.0
6	7	2 30	24 39.9†	5	7	8 36	17 26.1
4	9½	2 32	25 0.5	1	10	8 42	23 13.5
5	7	2 35	17 24.4	5	11	9 37	17 25.4
5	10½	2 43	17 32.2	1	8½	9 39	23 20.8
4	10	2 50	25 7.7	5	11	9 46	17 17.1
6	10	3 7	24 47.1	1	10	9 59	23 19.0
1	9	3 12	23 16.1	5	10	11 30	17 21.9
1	10	3 24	23 17.2::	5	10½	11 38	17 29.3
5	8	3 38	17 18.0	5	9½	11 48	17 26.9
5	10½	3 38	17 32.7	5	7	12 23	17 17.8
5	9½	3 44	17 28.5	5	8½	12 27	17 28.8
4	9½	3 48	25 2.5	5	8	12 39	17 31.5
5	10½	3 49	17 27.8	5	9½	12 42	17 21.2
4	11	4 13	25 0.7*	5	7	13 40	17 14.9
1	8	4 25	23 8.5	5	10	14 12	17 16.1
1	8	4 29	23 8.0	5	9	14 36	17 15.7
4	7	4 42	17 19.3	5	9½	14 51	17 18.9
5	8½	5 1	17 24.6	5	9	15 36	17 27.3
1	9½	5 9	23 28.7	1	9½	15 48	23 28.1
5	10½	5 11	17 23.4	1	9½	16 5	23 22.8
1	10	5 20	23 12.7	1	9½	16 5	23 28.1
1	8	5 21	23 19.4	1	10	16 7	23 25.8
1	11½	6 21	23 17.9	5	9	16 14	17 30.0
5	7	6 21	17 12.0	5	10	16 46	17 11.3
1	9½	6 29	23 25.2	5	10	16 49	17 18.5
5	10	6 39	17 31.6	5	10½	17 1	17 26.8
1	11½	6 52	23 24.9	1	10	17 6	23 27.2
5	9	7 29	17 31.6	1	9	17 15	23 22.9
1	10	7 41	23 23.6	1	9½	17 38	23 24.7
5	7½	20 7 49	—17 18.7	5	10	20 17 45	—17 28.4

* (4). † M. C.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
5	10	20 18 4	—17 26.1	1	8	20 29 16	—23 15.0
1	9½	18 39	23 15.2	1	9	29 25	23 13.4
5	8	18 42	17 28.1	5	8½	29 29	14 19.1
1	10	18 58	23 26.6	4	9½	29 55	15 44.2
5	9	19 10	17 17.3	6	10	29 58	14 53.7
5	9	19 21	17 13.6	6	8	30 23	15 4.6
5	9½	19 30	17 19.3*	4	8½	30 31	15 48.7
1	8	19 38	23 9.7	6	9½	30 31	14 53.0
1	9½	20 14	23 26.9	5	10	30 34	14 31.2
5	10	20 20	17 28.0	4	10	30 46	15 47.5
1	10	20 28	23 30.0	4	11	30 47	15 45.2
5	10½	21 19	17 16.3	6	9½	30 50	15 4.5
5	10	21 19	17 13.5	4	9½	30 56	15 32.5
5	9½	21 33	17 23.3	5	11½	31 1	14 12.4
5	9	21 52	17 12.9	6	10	31 53	15 12.2
1	9½	22 19	23 14.7	4	11	32 3	15 45.1
1	9½	22 25	23 16.5	6	9	32 12	15 3.6
5	9½	22 47	17 16.1	5	9½	32 18	14 25.4
1	8	22 50	23 13.4	4	11	32 22	15 46.4
1	8½	23 31	23 13.4	6	10	32 35	15 10.7
1	8½	23 34	23 11.2	6	7½	32 38	15 2.5
1	9½	23 37	23 16.4	4	8	32 44	15 40.7
1	10½	25 25	23 20.8	5	9	32 59	14 19.8*
1	9	25 37	23 16.0	4	9½	33 3	15 48.1
1	8	26 3	23 17.5	4	9½	33 4	15 53.0
1	9	26 9	23 22.7	6	10	33 23	15 5.8
1	9	26 12	23 15.8	5	11½	33 31	14 26.8
1	8	27 35	23 13.3	6	10	33 32	15 3.2
1	11	27 49	23 14.5	6	9½	33 46	15 4.2
1	11	27 53	23 14.0	1	8½	33 56	14 47.6
1	9½	28 29	23 28.2	7	10	33 58	17 43.3
6	10	28 52	15 9.4	1	9½	33 59	14 44.7
6	9	28 56	14 54.6	1	9½	34 1	14 36.6
5	11	29 5	14 22.7	1	8½	34 16	14 40.2
6	10	20 29 8	—15 8.7	4	11	20 34 27	—15 36.7

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
4	11½	20 34 31	—15 35.6	6	9	20 38 46	—15 6.7
5	11	34 38	14 24.3	1	11	38 48	14 37.2
4	10½	34 43	15 43.5	1	10½	38 48	14 49.4
5	11½	34 43	14 24.7	1	10	38 49	14 33.6
6	8½	34 44	14 52.1	5	9½	38 51	14 15.3
7	8	34 44	17 47.9	5	9½	38 51	14 12.5
5	8½	34 53	14 24.6	6	10	38 55	15 4.5
6	9½	35 7	15 1.2	1	11	38 58	14 49.0:
5	10	35 11	14 22.2	1	9½	39 0	14 37.2
6	9½	35 33	15 2.1*	4	9½	39 3	15 29.3
1	8	35 38	14 37.0	1	11	39 5	14 48.0
4	9½	35 39	15 29.8	6	9	39 16	15 12.8
4	11	35 43	15 49.2	7	11½	39 36	17 58.5
5	9½	35 54	14 22.5	7	10½	39 38	17 56.5
5	8	35 55	14 14.4	4	11½	39 58	15 45.2†
1	10	36 8	14 44.2	5	8½	40 6	14 8.4
1	11	36 13	14 33.0	6	10½	40 19	14 51.3
1	10	36 27	14 41.5	6	10½	40 20	14 55.3
4	9½	36 39	15 49.9	6	11	40 21	14 58.3
5	10	36 39	14 27.4	7	11	40 42	17 46.9
6	9	36 49	15 6.3	4	9	40 43	15 50.2
6	9	37 13	15 3.8	6	8	40 43	15 2.2
1	10	37 24	14 33.0	1	9½	40 55	14 47.9
7	9½	37 28	17 46.0	4	8½	40 59	15 48.0
1	9½	37 32	14 31.7	6	10	41 8	14 58.5
1	9	37 43	14 39.4	4	10	41 10	15 45.7
6	9½	37 44	14 56.2	1	9½	41 18	14 42.6
5	8½	37 48	14 25.7	1	9½	41 21	14 37.2
1	11	37 57	14 51.9	6	8½	41 22	14 58.2
5	10	37 57	14 25.8	6	10	41 48	15 0.3
6	10	38 7	15 2.4	6	10½	41 52	15 5.9
5	10½	38 11	14 29.5	4	8½	42 39	15 37.7
6	10	38 17	15 4.8	4	9	42 45	15 49.1
5	10	38 42	14 19.2	6	8	42 53	15 9.1
5	11	20 38 43	—14 13.5	1	8½	20 42 57	—14 44.1::

* (4). † An. 11½ *p*.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
1	10	20 42 59	—14 48.0::	5	9½	20 47 4	—14 27.3
7	11	43 6	17 57.1	1	9½	47 9	14 40.1
4	9½	43 9	15 48.1	1	11	47 9	14 50.8
6	11	43 14	15 4.5	6	9	47 33	14 58.5
1	9½	43 26	14 47.4	7	10	47 35	17 44.7
5	10	43 34	14 28.0	5	10	47 36	14 18.4
7	11	43 45	17 50.1	6	9½	47 36	14 55.5
7	11	43 47	18 3.9	6	9½	47 38	15 1.8
6	10	43 56	14 58.8	1	9	47 45	14 34.1‖
5	8½	44 15	14 19.5	1	9½	47 54	14 40.3
6	11	44 17	15 4.1	6	11	47 59	15 4.0
4	10	44 20	15 45.6	5	9½	48 0	14 23.7
1	9½	44 21	14 37.6*	4	10	48 23	15 37.2
6	11	44 28	14 52.6	5	10	48 23	14 19.9
1	9½	44 30	14 40.3	5	9½	48 25	14 23.2
1	8½	44 43	14 35.7	7	11	48 27	17 55.2
5	10	44 44	14 30.2	1	10	48 50	14 31.6
7	11	44 46	17 55.1	7	11	48 56	17 53.8
7	10½	44 49	18 1.2	4	10	48 58	15 38.7
5	10	45 0	14 18.2	5	8½	49 1	14 22.8
7	10	45 20	17 59.4	5	8½	49 2	14 22.7
1	8½	45 21	14 36.7	6	12	49 5	15 4.5¶
4	11	45 24	15 48.1†	6	10	49 13	15 5.2
4	11	45 26	15 46.3	1	10½	49 22	14 35.4
5	9½	45 31	14 17.1	1	9½	49 44	14 35.2
6	10	45 31	15 9.3	1	10	49 45	14 45.8
5	9	45 38	14 18.4	5	8½	49 51	14 18.8
7	10	45 41	17 57.6	1	10	50 1	14 36.5
1	10	45 43	14 35.7	7	11½	50 3	17 55.1
6	10	45 53	15 2.2‡	6	10	50 5	15 6.8
5	8½	45 59	14 18.2	1	10½	50 12	14 36.9
4	11	46 22	15 35.9	5	9½	50 28	14 15.4
4	9	46 24	15 31.3	6	9½	50 31	15 4.5
5	8	46 25	14 22.8	7	10½	50 46	17 55.2
4	9	20 46 39	—15 38.2§	4	9½	20 50 51	—15 53.3

* L. of double. † N. *f.* of double. ‡ (4). § An. 11th N. *p.* ‖ N. *p.* of double. ¶ N. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
7	10	20 51 21	—17 58.4	5	8½	20 55 22	—14 18.3
1	9	51 36	14 36.0	1	9	55 27	14 43.6
5	11	51 36	14 19.4	5	11	55 31	14 23.5
4	10	51 37	15 37.0	6	10½	55 33	14 57.5
4	10½	51 40	15 35.2	1	8	55 38	14 35.1
1	10	51 41	14 35.8	5	11	55 44	14 28.5
5	9	51 41	14 30.1	1	10	55 56	14 36.3
6	10	51 42	15 1.9	7	11	56 35	17 47.9
6	9½	51 43	14 57.4	4	9½	56 36	15 47.4
5	8	51 58	14 30.7	5	10½	56 39	14 28.9
6	9	52 10	15 3.0	6	10	56 44	15 2.8
5	9½	52 19	14 12.6	1	8	56 50	14 44.4
7	11	52 21	17 58.1	6	10	56 58	14 54.9
6	10½	52 33	14 59.2	1	10	57 4	14 48.6
6	10	52 40	15 4.0	5	11½	57 9	14 29.1
1	10	52 50	14 49.4	5	8½	57 12	14 23.9
7	9	52 51	17 58.9	1	10	57 13	14 37.4
1	12	53 9	14 50.5	5	9½	57 15	14 27.1
5	10	53 12	14 29.6	6	9½	57 20	14 57.8
5	11	53 16	14 26.1	6	9½	57 25	14 56.2
5	9½	53 18	14 24.0	7	11	57 29	17 45.2
7	10	53 21	17 59.2	7	11	57 35	17 46.5
1	10½	53 35	14 37.0	5	11	58 19	14 26.7
5	9½	53 35	14 15.4	4	10½	58 21	15 50.6
6	11½	53 54	15 4.2	7	10	58 27	18 0.1
7	10	53 56	18 5.6	7	10½	58 28	17 54.5
7	9	54 3	18 1.0	1	10	58 31	14 45.5
1	9½	54 7	14 35.3	5	9½	58 33	14 18.1
6	10	54 11	15 9.7	6	8½	58 36	15 6.1
4	12	54 14	15 48.2	6	11	58 39	15 2.0
1 6	8½	54 28	14 51.3	5	11	58 40	14 28.1
6	8½	54 38	14 58.1	1	10	58 45	14 46.4
1	9	54 39	14 30.9	6	8½	58 46	14 58.7
1	9	55 8	14 35.0	4	9½	59 3	15 52.7
4	11	20 55 18	—15 47.1	6	11	20 59 5	—15 3.7

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
4	9½	20 59 26	—15 51.1	19	10½	21 3 3	—13 11.1
5	11	59 38	14 29.6	7	10½	3 6	17 55.7
1	8	59 39	14 39.3	6	11½	3 10	14 56.5
4	10	20 59 46	15 28.8	1	8½	3 13	14 35.8
5	9	21 0 9	14 18.3	4	10	3 16	15 46.9
7	11	0 25	17 59.3	5	9½	3 17	14 29.2
19	11	0 33	12 58.2	1	10½	3 26	14 44.1
6	10	0 35	15 3.8	5	9½	3 39	14 24.8
7	11	0 35	18 0.1	5	10	3 42	14 26.8
19	10½	0 39	12 52.5	5	10	4 5	14 28.2
4	11½	0 43	15 48.2	6	9½	4 14	15 8.6
5	9	0 46	14 18.2	6	10	4 24	15 13.1†
6	11	0 49	15 8.7	7	9	4 25	17 57.5
4	11	0 52	15 48.3	7	7½	4 32	17 47.6
19	9	0 52	12 55.0	1	9½	4 34	14 42.0
6	10	0 55	14 59.3	19	8½	4 36	13 10.3
6	9½	1 8	15 2.8	7	10	4 40	17 58.5
7	11	1 10	17 59.2	1	10	4 46	14 49.8
1	9	1 21	14 47.8	1 6	10	4 49	14 51.5
19	9½	1 21	12 56.4	5	8	4 52	14 20.1
1	9	1 26	14 36.9	6	10	4 59	14 53.1
4	11	1 30	15 49.1	6	8½	5 1	14 58.6
7	8	1 32	17 54.1	7	10	5 5	17 57.6
6	10	2 1	15 6.3	6	9½	5 7	14 50.7
19	11	2 3	13 0.4	4	11	5 14	15 43.4
19	11	2 4	12 54.2	19	10½	5 17	13 4.4
7	10½	2 9	17 56.4	4	10	5 18	15 44.5
19	9	2 9	12 53.3	6	10	5 37	15 0.4
4	10	2 13	15 34.9	1	8½	5 42	14 46.9
6	9	2 30	15 2.9	5	8	5 47	14 18.4
6	9½	2 30	15 4.5*	7	11	5 49	18 5.2
4	10½	2 32	15 40.7	7	11	5 54	17 56.1
5	9½	2 33	14 11.2	1	8	5 59	14 37.6
19	9	2 36	12 59.6	1	9½	6 2	14 34.6
6	12	21 3 0	—14 55.2	5	9½	21 6 4	—14 30.5

* S. of double.

† ? Duplicate 12th Oct., 1849.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
19	10	21 6 7	—13 5.8	5	10½	21 9 36	—14 21.7
7	8	6 22	17 50.0	7	9½	9 48	17 48.9
19	9½	6 30	13 1.8	6	11½	9 55	15 9.2
5	11	6 35	14 22.3	19	11½	9 56	12 57.3
6	10	6 38	15 1.8	19	11½	10 2	12 58.9
4	10	6 45	15 36.3	4	11	10 14	15 37.3
6	10	6 45	14 58.2	6	11	10 15	15 11.5
7	11	6 53	18 0.1	6	11	10 17	15 7.4
1	10	6 54	14 48.9	1	10½	10 18	14 40.8
4	11	7 2	15 36.6	1	10	10 19	14 40.6
5	11	7 6	14 27.9	7	10	10 20	17 56.8
19	10	7 13	13 0.2	19	10	10 24	13 0.4
7	10½	7 48	18 1.2	4	11	10 28	15 36.9
6	10	7 52	15 6.3	4	8½	10 35	15 44.3
6	10	7 57	15 3.6	5	9	10 58	14 14.4
7	10½	7 57	17 56.8	1	9	10 59	14 37.4
1	8	8 3	14 38.9	7	9½	11 3	18 0.3
1	9½	8 9	14 40.0	4	10½	11 8	15 49.0
19	11½	8 10	12 59.1	19	10	11 11	13 7.8
6	11	8 12	15 3.9	7	10	11 14	17 54.5
4	10	8 14	15 41.7	4	10	11 15	15 44.8
19	11½	8 17	12 58.9	7	11	11 22	17 58.9
6	11	8 20	15 2.3	5	11	11 29	14 20.0
19	9½	8 25	13 8.1	5	10½	11 33	14 17.0
1	10	8 30	14 40.4	19	10½	11 33	13 9.4
1	9	8 35	14 41.2	5	10	11 45	14 17.1
1	9½	8 37	14 45.4	4	10½	11 46	15 49.2
5	8½	8 42	14 12.3	19	10	11 49	12 55.0
7	8½	9 4	17 47.9	6	10	11 52	14 53.4
6	9	9 13	14 48.4	6	9½	11 53	15 1.9
19	10½	9 13	13 6.6	4	10	12 40	15 46.7
19	10½	9 23	13 5.7	1	9½	12 44	14 33.5
5	10	9 29	14 33.3	7	11½	12 46	17 59.1
5	11	9 29	14 19.2*	1	9	12 48	14 34.0
5	9½	21 9 34	—14 24.8	6	10½	21 12 53	—14 52.4

* *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
5	10	21 12 55	—14 27.2	19	9½	21 16 37	—12 57.0
5	10	13 9	14 24.0	5	11	16 50	14 27.9
5	10	13 10	14 26.4	19	11	16 51	12 58.2
5	10	13 11	14 26.6	1	11	16 59	14 49.4
7	11	13 12	17 56.5	1	10½	17 12	14 36.8
7	11	13 15	18 2.4	5	10	17 12	14 24.3
1	10½	13 29	14 48.8	5	8½	17 14	14 15.5
1	8	13 33	14 40.4	5	10½	17 17	14 26.8
4	8½	13 39	15 43.7	1	9½	17 23	14 35.7
1	9½	13 41	14 51.7	7	10	17 26	18 1.2
19	11	14 3	13 3.2	6	11	17 39	15 4.7
19	11	14 26	13 4.6	4	9½	17 50	15 48.6
5	10	14 30	14 10.6	1	11½	18 8	14 49.8
4	9½	14 34	15 32.8	1	11½	18 10	14 52.4
19	11	14 34	13 8.8	1	10½	18 12	14 47.5
4	10	14 39	15 34.9	7	11	18 14	18 1.4
1	9½	14 42	14 46.9	4	9½	18 19	15 50.1
1	10	15 1	14 50.7	4	11	18 21	15 48.7
7	9½	15 5	17 43.7	7	7	18 23	17 54.8
7	9½	15 24	17 45.2	6	11	18 24	15 8.4
19	11	15 32	13 7.7	19	11½	18 25	13 7.5
7	11	15 33	17 47.6	7	9	18 32	18 5.1
4	10	15 35	15 48.8	19	11	18 32	13 10.5
5	9½	15 42	14 31.9	5	10	18 48	14 28.8
7	9	15 46	17 43.9	6	9½	18 52	15 5.9
4	9½	15 49	15 34.2	4	9½	19 6	15 49.6
1	9	15 51	14 45.1	1	9	19 13	14 41.9
1 6	9½	16 0	14 51.5	7	10	19 13	17 49.4
1	10	16 3	14 50.5	19	8½	19 13	13 10.7
5	11	16 5	14 30.5	19	8½	19 14	12 54.2
1	10½	16 7	14 46.8	19	11	19 15	13 8.9
19	11½	16 8	12 53.4	1	9	19 16	14 45.4
5	8	16 9	14 27.6	7	10	19 23	17 57.2
7	10	16 14	17 44.1	4	9½	19 26	15 47.3
6	10	21 16 34	—14 56.3	7	10	21 19 42	—17 58.3

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
4	10	21 20 0	—15 47.5	7	8	21 22 55	—17 54.9
19	10	20 2	13 5.6	4	11	23 25	15 50.4
6	11	20 5	15 4.3	5	11	23 29	14 21.0
5	9½	20 7	14 25.3	6	11	23 31	15 9.3
1	9	20 16	14 36.2	1	9½	23 35	14 38.7
5	10	20 19	14 26.4	7	11	23 36	17 58.7
7	10	20 20	17 59.8	19	11	23 39	13 12.2
5	11	20 21	14 26.0	1	10½	23 42	14 35.0
19	9	20 27	13 5.2	7	10	23 44	17 57.9
19	10½	20 30	13 7.4	1	10½	23 53	14 37.2
4	9½	20 36	15 52.9	5	10	23 57	14 27.0
19	11½	20 45	13 7.7	5	10	24 3	14 28.3
7	10½	20 48	17 59.5	5	9½	24 15	14 29.4
1	10	20 51	14 45.9	1	8	24 27	14 51.7†
5	10	20 56	14 22.8	7	9½	24 31	17 52.1‡
7	9½	20 56	17 58.9	1	9½	24 39	14 51.1
1	10½	21 10	14 34.0	4	10½	24 39	15 47.6
1	10½	21 24	14 34.8	5	11½	24 39	14 27.5
7	10	21 31	17 55.3	4	10½	24 42	15 46.3
6	11	21 38	14 56.5	5	9½	24 48	14 27.7
4	11	21 40	15 46.6	19	11½	24 49	13 6.4
4	10½	21 41	15 45.8	7	11	24 53	17 51.0
6	8½	21 41	14 52.6*	19	11½	24 53	13 3.6
7	10	21 46	17 55.5	7	11	24 56	17 57.8
1	9	21 59	14 48.4	19	11	25 2	12 55.9
7	8½	22 8	17 48.6	19	11	25 11	13 4.3
7	10	22 9	17 47.1	1	11	25 14	14 51.2
4	10	22 10	15 43.9	4	11½	25 17	15 38.7
6	11	22 24	15 1.6	4	8½	25 40	15 34.5
19	10	22 26	12 52.6	5	10	25 40	14 8.2
19	9½	22 31	12 54.7	1	9	25 51	14 46.4
5	9	22 39	14 19.1	1	9	25 51	14 36.0
19	9	22 40	12 54.3	4	10½	25 57	15 36.5
5	8½	22 51	14 18.4	7	10	25 57	17 46.6
5	10	21 22 53	—14 19.1	4	10	21 26 9	—15 37.2

* An 11th N. † N. *p.* of double. ‡ (4.)

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
19	10	21 26 10	—12 53.6	19	10	21 30 31	—12 54.7
5	9½	26 15	14 18.6	19	10	30 46	12 58.3
19	10	26 25	13 7.0	7	9½	31 4	18 1.4
1	9	26 33	14 41.5*	7	10	31 7	17 48.6
4	10½	26 44	15 37.8	4	11	31 9	15 44.1
1	9	26 52	14 42.8	4	12	31 11	15 51.3
4	10	27 4	15 37.2	4	11	31 13	15 43.7
7	10½	27 10	17 50.6	4	11	31 14	15 46.1
1	9	27 31	14 43.8*	5	9	31 40	14 16.8
7	8½	27 31	17 51.2*	5	10	31 43	14 22.6*
5	10	27 47	14 17.7	4	8½	31 52	15 39.6
5	9½	27 53	14 21.7*	19	10	31 52	13 8.9
7	10½	27 54	17 45.3	4	10	31 55	15 41.0
5	11	27 57	14 27.8	5	10	32 12	14 26.0
5	9	27 59	14 32.1	19	10	32 15	13 7.6
4	10½	28 8	15 48.5	5	11	32 17	14 25.4
19	10	28 11	12 52.7	19	9	32 17	13 12.5
19	11	28 12	12 56.5	4	–	32 32	15 41.7
19	11½	28 20	12 55.2	7	10½	32 45	17 57.8
4	11½	28 42	15 32.6	4	11	32 52	15 40.5
19	10½	29 8	12 55.3	1	9	33 0	14 41.6
4	10	29 18	15 34.1	4	9½	33 0	15 40.0
1	9	29 21	14 31.0	7	10	33 6	17 49.4
5	9	29 21	14 26.4	7	9½	33 29	17 56.8
4	10	29 25	15 32.9	4	8½	33 38	15 46.8
19	10½	29 35	13 9.1	19	10	34 3	12 56.1
19	10	29 39	13 3.2	19	9½	34 5	13 1.9
5	10	29 42	14 22.2	5	11	34 7	14 28.9
7	10½	29 49	17 49.1	5	11	34 8	14 23.9
19	9	30 4	12 58.9	5	9½	34 9	14 27.0
5	10½	30 5	14 27.7	1	9½	34 31	14 39.5
1	9½	30 7	14 37.5	5	11	34 34	14 25.2
1	10	30 27	14 38.0	4	10½	34 42	15 46.4
7	9½	30 29	18 3.3	1	10	34 45	14 39.3
7	11	21 30 30	—17 57.1	4	11	21 34 58	—15 44.4

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
5	11	21 35 6	—14 27.3	4	10½	21 40 7	—15 47.2
4	8½	35 13	15 49.6	4	10½	40 23	15 49.0
7	8½	35 14	18 4.1	4	9½	40 40	15 44.2
4	9½	35 16	15 37.9	5	10	41 1	14 22.8*
4	8½	35 21	15 40.2	1	9	41 20	14 46.9
7	11	35 23	18 5.0	4	10	42 3	15 38.6
4	9½	35 44	15 37.5	4	10	42 11	15 46.2
1	8½	35 51	14 38.0	1	9	42 17	14 36.0
7	9½	35 52	17 47.1	5	11	42 22	14 27.3
1	8	36 36	14 38.8	1	10½	42 36	14 37.0
4	9½	36 49	15 45.4	4	8½	42 44	15 48.9
7	11	36 51	17 48.8	1	10	43 10	14 41.5
7	11	37 0	17 47.3	1	10½	43 10	14 37.9
4	8½	37 4	15 39.4	1	10½	43 22	14 35.9
1	8½	37 6	14 35.9	5	9	43 24	14 16.7
5	11½	37 8	14 30.1	4	10	43 42	15 30.0
4	11½	37 12	15 34.6	4	10	43 49	15 32.9
5	10	37 18	14 27.4	4	9½	44 9	15 31.4
7	10	37 32	17 43.3	4	10½	44 45	15 35.1
7	10	37 45	17 45.5	4	10½	45 11	15 39.5
1	10	37 52	14 44.1:	4	10½	45 21	15 50.8
1	10½	38 2	14 46.2	1	8	45 46	14 38.7
7	11	38 10	17 58.6	1	10	46 9	14 41.1
7	10	38 19	17 48.3	4	11	46 18	15 36.1
4	12	38 22	15 45.0	4	11	46 26	15 30.0
1	10	38 25	14 36.7	1	11½	46 34	14 38.2
4	11	38 33	15 44.6	1	11½	46 47	14 38.9
5	9½	38 41	14 12.1	1	10	46 53	14 33.5
4	9½	38 51	15 40.4	1	11	47 5	14 40.1
4	9	38 54	15 38.7	4	10	47 38	15 42.5
1	10	38 57	14 35.4	4	9½	47 58	15 47.4
4	11½	38 59	15 35.5	4	9	48 7	15 49.0
1	9½	39 16	14 48.7	1	9½	48 14	14 50.9
4	8½	39 26	15 35.1	4	9½	48 28	15 47.5
5	11	21 39 43	—14 31.3	1	10	21 48 29	—14 48.7

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
1	11½	21 48 43	—14 46.9	1	8½	21 59 32	—14 43.8
4	10	49 16	15 43.5	4	10	59 40	15 46.6
4	10	49 23	15 46.0	1	9½	59 41	14 38.2
1	10	49 54	14 34.2	4	9½	21 59 52	15 38.1
1	8	49 57	14 39.0	4	11½	22 0 57	15 33.5
1	10	50 7	14 36.1	4	11½	0 58	15 35.1
1	10	51 3	14 35.4	4	11½	0 59	15 33.3
1	9½	51 19	14 39.9	1	10	1 10	14 42.8
1	8	51 21	14 34.4	1	11	1 18	14 36.4
4	10	51 32	15 35.9	1	11	1 48	14 37.7
1	9½	52 1	14 45.7	4	9½	1 49	15 50.8
4	10	52 20	15 47.0	4	8½	1 50	15 40.7
4	10	52 38	15 50.7	4	10½	1 58	15 51.0
1	10	52 40	14 41.0	4	8½	2 1	15 42.5
1	8	52 44	14 31.4	4	8½	3 7	15 34.1
4	9	52 45	15 47.5	1	10	3 20	14 43.6
4	10	54 6	15 53.6	1	8½	3 25	14 47.3
4	9½	54 9	15 43.4	1	10	3 26	14 49.6
1	9½	54 26	14 46.9	4	9½	4 3	15 49.3
4	9	54 28	15 34.8	4	8½	4 13	15 42.4*
1	9½	54 31	14 38.0	1	10	5 12	14 40.2
1	9½	54 55	14 45.1	1	11	6 58	14 40.8
4	9	55 26	15 41.2	1	10	7 36	14 40.8
1	11	55 31	14 48.0	1	10	7 37	14 46.0
4	10	55 44	15 40.4	1	10	9 47	14 47.4
1	9½	55 49	14 48.2	1	9½	9 47	14 38.0
4	10	56 2	15 35.1	1	9½	10 14	14 49.6
1	9	56 15	14 47.3	1	9	10 50	14 51.6
1	10	56 31	14 41.2	1	10	11 23	14 46.2
4	11	56 51	15 48.8	1	11	12 47	14 38.3
4	10	57 16	15 48.9	1	10	12 57	14 50.2
1	9½	58 28	14 41.7	1	10	14 22	14 38.5
1	9½	58 51	14 38.0	1	9½	14 28	14 46.7
4	11	59 9	15 39.5	1	9	15 15	14 40.5:
4	11	21 59 30	—15 44.5	1	8½	22 15 51	—14 36.0

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
1	8½	22 15 52	—14 34.5	1	8½	22 21 51	—14 46.4
1	8	15 57	14 39.5	1	10	22 38	14 44.7
1	7½	17 0	14 45.4	1	8	23 35	14 34.6
1	8½	17 8	14 49.5	1	8½	24 2	14 43.5
1	10	17 9	14 48.7	1	10½	25 43	14 49.6
1	10	17 16	14 40.4	1	10½	26 0	14 45.9
1	8	18 24	14 52.5	1	10	26 5	14 50.9
1	9	18 51	14 49.7	1	10½	27 23	14 49.7
1	8	19 18	14 54.7	1	8	28 13	14 48.8
1	9	19 39	14 50.8	1	9½	28 37	14 44.1*
1	8	20 40	14 34.0	1	10	29 27	14 45.4
1	10	20 50	14 33.8	1	11	22 31 25	—14 36.2
1	10½	22 21 9	—14 39.8				

* (4).

Notes.—1st—Stopped by fog.
6th—Between α. 19h. 13m. and 20h. 4m. strong moonlight; no dependence can be placed on the magnitudes.
19th—Baffled by clouds and moonlight.

APPROXIMATE MEAN PLACES, FOR JANUARY 1, 1850,

OF

1,137 STARS NEAR THE ECLIPTIC,

OBSERVED IN SEPTEMBER, 1851, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
16	10	19 32 30	—17 41.4	16	11	19 35 9	—17 43.2
16	11	32 38	17 40.7	16	10½	35 37	17 44.0
16	12	33 19	17 31.1	16	8½	35 52	17 45.2†
16	11½	33 25	17 32.1	16	9½	36 13	17 47.4
16	11½	33 27	17 37.7	16	9½	36 36	17 50.6
16	12	33 27	17 37.1	12	10½	37 3	17 6.9
16	11½	34 36	17 33.7	16	10½	37 26	17 34.6
16	12½	19 34 43	—17 38.2	16	11	19 37 35	—17 36.3

† M. C.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′ ″			h. m. s.	° ′ ″
16	11	19 37 47	—17 38.7	16	11½	19 46 18	—17 47.4
16	9½	38 5	17 32.4	16	11½	46 22	17 52.5
12	9½	38 54	16 49.6	12	10	46 37	17 9.5
12	8	39 20	16 51.9	16	11	47 9	17 47.2
16	10½	39 24	17 47.8	16	11½	47 11	17 43.2
12	9½	39 42	17 4.9	15	11	47 24	22 1.7
12	11	39 53	17 8.3	12	11	47 33	17 2.6
16	10	39 55	17 30.3	12	10½	48 13	16 57.7
16	12	40 7	17 44.9*	12	8	48 14	17 0.4
12	11½	40 10	17 3.6	16	10½	48 14	17 44.4
16	12	40 37	17 45.7	15	10½	48 21	21 50.5
16	10	40 40	17 47.6	16	12	48 32	17 48.8
12	10½	40 47	17 4.7	12	10	48 43	17 2.7
12	10	41 30	17 5.5	15	12	48 47	21 53.8
16	11	41 45	17 42.0	16	10½	48 54	17 38.1
16	12	41 54	17 44.2	12	11	48 58	16 53.0
12	12	42 18	16 53.7†	15	10½	48 59	21 54.7
12	11½	42 50	16 53.5	16	11	49 0	17 37.5
12	10	42 59	16 55.0	12	11	50 17	16 52.9
16	9½	43 8	17 38.6‡	15	11½	50 19	22 5.5
12	9	43 26	16 52.9	16	12	50 23	17 48.3
16	10	43 26	17 40.1	15	11½	50 24	22 5.8
16	10	43 28	17 46.6	12	11½	50 25	16 53.6
16	10	43 34	17 37.1	12	10	50 33	16 55.9
12	10	43 39	17 8.0	16	11½	50 51	17 46.0
16	10	44 2	17 44.2	12	11	51 16	17 9.8
16	9½	44 24	17 42.5	16	10	51 17	17 33.8
15	11½	44 36	22 7.5	16	10	51 35	17 38.4
16	10	44 42	17 45.8	15	12	51 24	22 6.4
12	11½	45 5	17 1.6§	12	10½	52 18	17 4.4
12	8	45 13	17 1.7§	15	9½	52 22	21 57.5
16	10½	45 26	17 50.2	12	11	52 24	17 12.0
16	9	45 31	17 47.9	16	10½	52 25	17 35.9
16	11	45 59	17 52.7	16	9½	52 28	17 48.9
15	11	19 46 12	—22 6.3	16	10	19 52 32	—17 36.0

* N. of double. † An. 11th *p.* ‡ M. C. § (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
15	12	19 52 38	—21 55.0*	15	11½	19 59 52	—21 52.2
12	8½	52 39	16 58.3	16	10½	59 54	17 47.9
15	10½	52 44	22 1.4	12	11	59 55	16 56.6
16	10	52 53	17 32.7	16	10½	19 59 55	17 49.7
16	10	53 5	17 33.0	12	12	20 0 3	17 4.2
12	11	53 47	16 49.6	15	10	0 20	21 51.4
12	9	53 49	16 54.6	16	10½	0 26	17 34.8
16	12	54 23	17 45.4	15	10	0 47	21 53.4
16	8	54 30	17 45.6†	12	11	0 53	16 51.9
12	11½	54 33	17 9.7	16	10½	0 58	17 33.7
15	11½	54 33	22 2.0	15	11½	1 5	22 9.1
15	11	54 48	21 55.1	15	9	1 6	21 57.2
16	12	54 48	17 44.1	17	11	1 13	23 46.7
12	8	55 6	17 9.8	16	9	1 18	17 32.6†
15	12	55 17	21 53.8	12	10	1 46	17 7.8
16	10½	55 22	17 40.0	15	11	1 55	22 8.5
16	10	55 29	17 36.8	15	12	1 56	22 3.6
15	12	55 30	21 54.5	16	12	2 10	17 38.1
12	9	55 32	16 52.5	12	9	2 12	17 12.1
16	11	55 33	17 44.2	16	12	2 15	17 32.4
15	10½	55 47	22 1.2	16	11½	2 16	17 36.1
12	10	55 57	16 53.8	15	11	2 48	22 3.7
15	10	56 1	21 57.4	16	11	2 52	17 38.0
15	11½	56 58	22 9.5	12	10	2 55	16 59.4
12	11½	57 5	17 8.4	12	10½	3 6	17 9.7
15	12	58 2	22 5.8	15	10½	3 6	22 5.5
15	12	58 5	22 9.1	16	11	3 8	17 47.3
16	11	58 25	17 38.7	15	12½	3 19	22 6.9
16	8½	58 29	17 37.2†	15	12	3 19	22 7.9
12	12	58 43	17 9.8	16	10½	3 31	17 47.8
15	12	58 54	21 57.8	17	11½	3 33	23 49.1
12	10	59 6	17 8.5	16	10½	3 57	17 33.1
16	10	59 9	17 48.6	12	10	4 12	17 2.3‡
16	12	59 27	17 49.6	16	10½	4 19	17 47.2
12	12	19 59 37	—17 2.8	12	11	20 4 20	—17 9.1

* First of a group. † M. C. ‡ (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
15	9½	20 4 21	—22 3.1	16	10½	20 8 12	—17 39.4
15	8	4 26	21 53.0	12	11	8 24	17 2.0
15	10½	4 32	21 55.2	13	10½	8 26	21 39.6
16	10	4 32	17 46.6	17	10	8 27	23 44.3
16	12	4 40	17 47.1	15	11½	8 30	22 8.0
13	11½	4 43	21 41.4	12	10½	8 42	17 11.9
15	12	4 50	22 2.3	13	11	8 45	21 49.9:
13	12	4 51	21 47.0	15	12	9 32	21 58.3
15	12	4 57	22 1.9	15	12	9 40	21 54.6
15	11	5 3	21 53.5	13	10½	9 45	21 47.5
13	10	5 14	21 44.8	12	10½	10 2	17 9.4
16	9	5 42	17 32.9*	13	12	10 3	21 45.8
15	9	5 43	22 0.4	17	10	10 5	23 32.4
12	9½	5 47	17 3.5	15	10	10 19	22 6.6
13	12½	5 48	21 34.4	13	11½	10 21	21 45.1
17	11	5 54	23 38.3	15	10	10 21	22 1.1‡
13	9½	5 56	21 38.1	17	11	10 23	23 46.1
16	11	6 8	17 49.2	16	9½	10 25	17 41.4‡
16	10	6 25	17 48.3	12	11½	10 31	16 53.6
17	10½	6 39	23 49.1	16	10½	10 32	17 33.8
13	10½	6 42	21 48.8	13	9	10 33	21 37.9
15	8½	6 43	21 54.8	17	10½	10 38	23 46.3
16	11	6 45	17 46.5	16	9½	10 45	17 36.6
17	10	6 45	23 32.6	12	10	10 46	16 57.7
13 15	10½	6 50	21 48.7	17	10½	11 2	23 36.0
15	10½	7 12	21 51.3	13	10½	11 10	21 39.5
13	11	7 17	21 49.2	15	9½	11 10	22 2.7‡
17	10½	7 21	23 44.1†	17	10½	11 20	23 37.2
17	11	7 34	23 46.7	13	12	11 40	21 49.8
13	10	7 35	21 46.6	17	10	11 41	23 33.3
16	11	7 39	17 45.3	15	10	11 46	21 54.1
15	11½	7 54	21 50.0	17	11	11 50	23 43.3
17	11½	8 0	23 42.7	16	10	11 54	17 46.5
12	11½	8 7	17 8.8	17	11	11 59	23 43.7
15	11½	20 8 9	—21 51.3	17	12	20 12 9	—23 43.6

* M. C. † N. of double. ‡ (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
12	11½	20 12 10	—17 0.9	17	11	20 16 49	—23 36.9
12	10½	12 11	17 3.9	16	10	16 52	17 48.4
12	9	12 27	17 9.8	16	12	16 56	17 36.0
13	11½	12 39	21 45.2	15	10½	17 16	22 8.2
13 15	8	12 48	21 52.9	15	12	17 33	22 5.7
13	11½	12 48	21 40.2	17	10	17 38	23 48.3
15	11	12 57	22 5.0	17	10	17 46	23 49.7
15	9½	13 0	22 3.2	16	12	17 54	17 45.1
12	11½	13 57	17 1.9	16	11	17 57	17 42.6
17	11	14 0	23 43.8	12	11	17 58	16 59.3
12	8½	14 2	16 59.6	12	11½	18 3	16 56.7
15	11	14 14	21 56.1	13	10½	18 4	21 38.8
16	11½	14 14	17 45.9	12	11½	18 19	17 6.9
17	11½	14 15	23 46.6	12	10	18 22	17 10.1
15	11½	14 22	22 3.5	15	11½	18 31	21 55.7
16	11½	14 29	17 45.7	17	11½	18 34	23 45.3
15	10	14 34	21 53.2	16	9	18 35	17 35.0*
17	11	14 41	23 47.7	15	12½	18 53	21 54.5
13	9	14 44	21 48.2*	17	11½	18 53	23 38.8
13	11	14 51	21 39.2†	16	9½	18 54	17 33.3
15	11½	14 58	21 55.6	13	11	19 1	21 35.3
13	9	15 21	21 38.8†	17	11½	19 1	23 39.4
16	9½	15 21	17 45.3*	15	11	19 8	21 56.2
17	11	15 24	23 37.3	12	12	19 32	17 8.4
15	12	15 26	21 54.1	16	11	19 41	17 42.5
12	11	15 37	17 4.1	15	11	19 43	22 4.0
17	9½	15 43	23 44.8	12	11½	19 56	17 9.8
13	10	15 49	21 40.0	15	10	19 58	21 57.9
12	11½	15 58	17 6.1	16	11	20 9	17 44.7
15	12	16 4	21 56.3	15	10	20 11	21 54.9
17	9	16 17	23 39.7‡	12	10½	20 14	16 59.6
16	11½	16 34	17 31.9	13	11½	20 23	21 46.5
13	9	16 43	21 38.2	12	11	20 48	16 53.0
15	9½	16 44	21 57.9	15	12½	20 54	22 9.9
17	10½	20 16 46	—23 36.5	17	10	20 20 56	—23 51.2

* M. C. † (4.) ‡ (4) M. C.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
13	10	20 21 6	—21 41.6	12	12	20 25 34	—17 9.2
16	11	21 11	17 48.7	13	11	25 37	21 44.8
16	10	21 19	17 36.1	13	12	25 46	21 35.9
17	10	21 21	23 45.4	12	11½	25 49	17 10.0
16	9½	21 40	17 31.7	13	11	25 50	21 35.8
15	8½	21 41	22 9.0	15	10	25 59	21 56.5
13	10½	22 11	21 42.0	12	11½	26 17	17 5.1
15	12	22 21	21 56.0	13	12	26 26	21 49.4
12	11½	22 29	16 59.1:	17	11	26 32	23 34.3
13	12½	22 33	21 34.0	15	12	26 33	22 2.7
16	11	22 37	17 37.4	17	11½	26 33	23 37.2
12	10	22 40	16 56.4	17	11½	26 41	23 36.4
15	12½	22 53	21 58.5	15	12	26 42	22 3.9
17	10	22 54	23 43.2*	12	11	26 49	17 1.5
17	11	23 7	23 42.5*	13	10½	26 56	21 46.0
16	11½	23 13	17 44.6	15	11	26 58	21 55.7
17	9½	23 18	23 39.6	13	11½	27 12	21 46.1
16	12½	23 23	17 44.9	15	10	27 15	22 4.9
15	12	23 33	21 55.8	12	11	27 18	17 6.0
15	11	23 49	21 57.5	17	11½	27 31	23 50.3
15	11	23 49	22 6.5	13	11½	27 33	21 44.3
16	11	23 58	17 46.0	13	11	27 35	21 32.9
13	11½	24 15	21 46.6	16	9	27 45	17 31.9
17	10	24 21	23 41.7	17	12	28 2	23 46.9
15	11	24 36	22 1.2*	15	12	28 24	22 7.9
15	9	24 42	21 55.7	16	11	28 29	17 43.6
15	11½	24 51	21 55.5	13	10½	28 35	21 37.2
16	11½	24 58	17 44.0	15	11½	28 37	21 59.8
17	10½	24 58	23 39.8*	13	11½	28 44	21 39.3
17	11½	25 1	23 49.4	12	11½	28 47	17 4.9
12	12	25 2	17 4.1	17	11½	28 52	23 47.5
16	11	25 3	17 45.6	15	8½	28 53	21 51.0
12	12	25 13	17 8.7	12	10½	29 3	17 6.2
17	8½	25 17	23 45.5†	17	11	29 14	23 45.6
15	11	20 25 24	—22 5.0	12	12	20 29 18	—17 6.9

* (4). † M. C.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
15	9½	20 29 23	—22 5.0	15	12	20 33 54	—22 10.0
17	11	29 29	23 46.7	16	12	34 3	17 44.3
12	11½	29 31	17 7.3	16	12	34 8	17 44.0
16	11½	29 35	17 42.3	13	9	34 51	21 38.0
15	10	29 48	21 53.8	15	10½	34 56	22 7.6
12	11	30 2	16 57.9	15	9½	35 4	22 1.5†
13	10	30 16	21 36.8	13	8½	35 6	21 46.0
17	11	30 16	23 38.6	15	12	35 6	22 7.1
17	11½	30 18	23 50.9	13	10	35 7	21 48.9
12	10½	30 39	16 58.6	15	10	35 18	21 52.6
17	12	30 43	23 48.3	13	7½	35 30	21 43.7
13	10½	30 48	21 33.6	15	9	35 51	22 8.4
17	9½	31 14	23 33.2	13	8½	36 34	21 41.4†
17	9½	31 16	23 31.3	15	11½	36 37	22 4.6
17	12	31 22	23 34.2	15	11½	36 57	22 5.7
13	11½	31 32	21 34.9	15	12	37 9	22 5.2
15	10½	31 32	22 7.7	13	12	37 35	21 49.8
15	10	31 34	22 5.7	13	11½	38 1	21 47.5
13	9½	31 44	21 44.5	13 15	11½	38 1	21 53.1
15	11½	31 47	22 3.8	15	11½	38 46	22 5.8
15	9	31 48	22 8.9	15	11½	38 50	21 59.3:
16	11½	32 3	17 35.0	13	12	39 12	21 36.4
17	11½	32 30	23 30.3	13	12	39 19	21 37.4
13	10½	32 36	21 35.5	13	10	39 23	21 49.4‡
15	11½	32 37	21 56.0	13	11½	39 24	21 34.5
15	11	32 45	22 7.5	15	9½	39 39	21 53.8
13	11½	32 56	21 35.3	13	12½	40 24	21 49.2
13	11½	33 4	21 27.7	13	11	41 2	21 44.7
17	8½	33 4	23 39.9*	15	10½	41 26	22 4.8
17	12	33 22	23 47.5	15	10½	42 3	22 7.2
13 15	10	33 24	21 48.1	13	11½	42 17	21 33.6
17	9	33 24	23 31.9	15	10½	42 28	21 55.9
13	10½	33 32	21 45.4	13	9	42 49	21 34.8
16	12	33 33	17 34.4	13	10	42 53	21 41.5
13	12	20 33 47	—21 50.3	15	10½	20 42 58	—21 55.1

* (4) M. C. † (4). ‡ N. *p.* of double.

Days.	Obs.	Mag.	α. h.	m.	s.	δ. °	′
15		11	20	43	56	—21	59.1
13		10½		44	25	21	50.1
15		11½		44	35	22	7.5
13		11		45	1	21	44.0
13		11½		45	36	21	48.5
15		9		45	45	22	1.4*
13		11½		45	46	21	44.2
15		10		45	51	22	2.5
13		11½		46	1	21	49.8
13		9½		46	45	21	40.8
13		11		47	26	21	43.7
15		12		47	54	22	3.4
13		11		48	22	21	48.8
13		11½		48	34	21	49.6
13		9		49	14	21	47.4
13	15	10		49	40	21	48.4
13		10		50	5	21	37.0
13		11		50	9	21	39.3
13		10½		50	22	21	50.5
13		11		50	24	21	39.6
15		10½		50	57	22	9.1
15		9½		51	18	22	10.9
13		10½		51	34	21	47.5
15		11		52	12	21	57.5†
15		11		52	18	22	1.6*
15		9½		52	37	22	1.7*
13		9		53	29	21	42.4
15		9		53	30	21	54.8‡
15		8		53	34	21	59.8
15		8½		54	46	22	7.5
15		11½		55	0	21	51.5
15		12		55	33	21	55.3
13		11½		55	35	21	44.0
15		11		55	41	21	53.4
15		11	20	56	0	—22	6.1
15		10½	20	56	37	—22	10.3
15		12		56	51	22	5.3
15		12		58	12	21	55.2
23		11½		58	34	12	12.9
23		11		58	57	12	10.9
15		10		59	1	22	6.8
23		11½		59	5	12	14.2
12		9½		59	24	13	54.8
15		9		59	24	21	48.3
12		11		59	36	13	52.3
15		11	20	59	37	21	57.8
17		11	21	0	3	12	50.5
12		11½		0	10	14	7.5
23		11		0	27	12	21.7
12		9		0	33	13	55.6
16		11		0	59	13	46.7
15		10½		1	5	22	5.9
16		11		1	5	13	46.3
16		10		1	17	13	35.1
23		9½		1	24	12	12.6
15		10		1	25	22	10.9
17		9½		1	35	12	32.4
16		10½		1	39	13	43.5
16		10½		1	49	13	47.1
17		10½		1	53	12	39.0
15		12		1	59	21	52.3
17		11½		2	15	12	39.4
15		12		2	16	21	52.6
12		10		2	18	13	55.8
17		10		2	21	12	36.2
23		11½		2	30	12	28.6
16		10		3	1	13	43.2
13		10		3	20	18	9.7
15		11½		3	20	22	3.2
15		10½	21	3	26	—21	52.6

* (4). † *f.* of double. ‡ 11th N. *p.*

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
17	11½	21 3 27	—12 34.1	15	8½	21 6 40	—21 54.6
15	11½	3 28	21 57.4	13	11	6 55	18 9.8
13	11½	3 30	18 7.7	16	10½	6 56	13 44.6
16	9½	3 37	13 34.3	12	10½	7 0	13 55.6
17	11½	3 43	12 34.1	12	10	7 7	13 56.2
15	10½	3 55	22 8.9	13	10½	7 11	17 52.8
17	10½	3 57	12 32.0	16	10	7 29	13 42.6*
23	11	4 4	12 18.1	23	11	7 54	12 28.7
23	10½	4 4	12 27.7	17	11½	8 0	12 37.4
17	8	4 10	12 31.5	17	11	8 18	12 37.6
12	11½	4 13	13 52.0	23	11½	8 23	12 28.6
23	9	4 16	12 25.8	13	11½	8 25	18 8.9
15	9	4 29	21 53.7	23	11	8 31	12 29.0
16	11½	4 32	13 43.8	13	11½	8 32	18 4.1
17	12	4 39	12 49.5	13	9	8 34	17 52.1
13	10½	4 40	18 5.6	23	12	8 54	12 13.2
12	11	4 49	13 52.1	17	11	9 1	12 46.2
12	10	4 58	14 10.3	23	11	9 7	12 12.5
13	10½	5 0	18 2.4	23	11½	9 23	12 18.3
17	11½	5 11	12 44.1	16	10½	9 28	13 44.4
17	12	5 28	12 45.3	23	10	9 43	12 17.8
16	11	5 32	13 33.0	17	10½	9 46	12 37.4
15	10	5 40	22 2.6*	16	11	9 59	13 43.1
12	11	5 43	14 10.3	16	12	10 9	13 38.2
13	9	5 46	17 53.0	13	10	10 10	18 9.4
23	11½	5 49	12 14.9	17	11	10 12	12 34.2
15	12	5 51	21 53.7	16	11	10 24	13 45.5
16	11	5 59	13 31.5	17	10½	10 25	12 34.0
23	10½	6 6	12 16.6	23	12	10 45	12 12.8
17	11	6 23	12 43.8	17 23	10	10 54	12 33.1
23	9½	6 28	12 26.8	17 23	10	11 4	12 32.7
23	10½	6 33	12 18.1	13	12	11 6	17 53.7
13	8	6 34	18 11.4	16	10	11 7	13 50.3
12	11	6 35	14 7.5	13	12	11 11	17 54.4
23	10	21 6 35	—12 29.2	23	11½	21 11 39	—12 14.1

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
16	10	21 11 48	—13 47.9	17	12½	21 15 50	—12 42.1
17	12	12 4	12 35.9	16	11½	15 55	13 43.2
12	11½	12 9	14 6.2	13	12	16 18	17 56.4
17	11	12 10	12 31.8	16	11½	16 21	13 42.7
12	11½	12 22	13 54.5	23	10	16 41	12 13.4
17	11	12 39	12 37.0	23	12	16 42	12 24.4
17	11½	12 40	12 39.7	17	11½	17 13	12 35.1
23	9½	12 45	12 18.0	12	12	17 33	14 11.3
17	11	12 48	12 38.1	23	11½	17 42	12 16.4*
23	10	13 0	12 19.1	16	10	17 44	13 42.5
13	12	13 10	18 5.8	13	10½	17 58	18 3.9
16	11	13 14	13 45.4	16	11½	18 5	13 46.3
16	10½	13 28	13 37.1	16	11	18 9	13 45.4
16	10	13 30	13 42.3	13	10½	18 11	18 5.1
13	11	13 38	18 5.0	23	11	18 17	12 17.9
12	11	13 42	14 1.0	23	11	18 52	12 21.6
23	10	13 48	12 18.9	16	11½	19 3	13 47.1
13	12	13 49	17 52.2	16	12½	19 24	13 48.0
17	11	13 53	12 49.8	23	11	19 35	12 22.9
12	11½	14 3	14 9.4	16	11	19 42	13 48.0
16	11½	14 18	13 50.0	12	11	19 49	14 5.0
13	12	14 29	17 51.6	16	11½	19 52	13 45.5
17	12	14 42	12 49.3:	12	11	20 9	13 59.9
16	11½	14 45	13 30.9	13	11	20 26	17 57.6
12	11	14 51	14 3.5	16	9	20 31	13 32.0
23	9½	15 0	12 17.3	13	11	20 50	18 8.1
13	11	15 2	18 4.6	12	11	21 13	13 59.8
17	11	15 14	12 48.7	16	9½	21 13	13 37.9
23	12	15 17	12 26.5	16	10½	21 23	13 33.7
17	10	15 24	12 34.3	17	9½	21 44	12 34.5
12	11	15 32	14 0.1	23	10½	22 3	12 22.4
13	10½	15 34	18 9.8	16	12	22 18	13 45.5
13	11½	15 37	18 1.0	12 16	10	22 30	13 52.3
23	12	15 37	12 23.5	16	11	22 33	13 45.7
12	11	21 15 42	—14 4.5	23	12	21 22 34	—12 23.9

* 11th S. p.

Days. Obs.	Mag.	α.	δ.
		h. m. s.	°
23	10	21 22 36	—12 26.2
23	11½	23 13	12 16.5
12	10	23 30	14 9.1
16	10½	23 37	13 43.4
17	11½	23 40	12 36.8
23	11	23 40	12 26.7
23	10	23 49	12 24.5
16	9	24 3	13 42.2*
16	10	24 6	13 49.7
17	11	24 10	12 43.8
17	11	24 12	12 35.0
23	10	24 19	12 24.4
17	11	24 26	12 48.0
13	10	24 36	17 50.8
16	11	24 45	13 46.6
16	11½	25 1	13 46.9
16	11½	25 13	13 47.4
17	11½	25 19	12 50.6
16	9½	25 33	13 36.7
13	10½	25 48	17 55.1
23	10	25 52	12 26.0
16	10	26 11	13 36.7
13	12	26 21	18 4.3
12	11	27 20	13 52.6
15	11	27 31	9 48.0
15	10	27 40	9 58.6
13	9½	28 25	18 9.8
13	10	28 33	18 4.7
13	9	28 34	18 8.1
15	11	28 50	9 51.3
15	11	29 40	9 51.9
12	11	29 42	14 6.9
12	9½	29 47	14 7.6
15	10	29 50	9 57.6
15	11	21 29 52	—9 52.1

Days. Obs.	Mag.	α.	δ.
		h. m. s.	°
16	12	21 30 35	—13 36.7
15	10½	30 38	9 51.8
16	11	30 57	13 38.1
15	11	31 2	10 9.1
16	10	31 9	13 46.0
16	12	31 23	13 44.5
15	10	31 26	9 52.3
16	11½	31 48	13 42.9
15	9	31 59	9 55.5
15	11	32 17	9 57.4
16	11	32 28	13 38.0
13	10	32 29	17 56.8
15	11	32 41	10 0.9
15	10½	32 41	10 7.5
13	10	32 48	18 8.0
15	10½	32 51	10 7.2
15	10½	32 54	10 0.0
15	10	33 31	10 3.8†
16	9½	33 32	13 39.9*
12	10	33 34	13 55.6
16	11	33 38	13 44.7
16	10	33 59	13 42.3*
13	10	34 5	18 4.1
16	11	34 29	13 39.2
16	11	34 31	13 39.0
12	10½	34 33	14 8.9
15	9½	34 36	10 8.9
16	11	34 37	13 38.2
13	10	34 42	17 55.5
15	10½	34 54	10 12.1
12	10	35 9	13 57.0
15	11	35 18	9 52.4
15	10½	35 29	9 51.1
15	11½	36 36	10 4.8
12	11	21 36 40	—13 57.0

* (4).

† An. 11th N. *p.*

Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′
15	12	21 37 6	—9 56.7
12	11	37 13	14 4.0
15	10	37 13	9 57.7
16	11	38 24	13 45.7
15	12	39 17	10 5.8
15	10½	39 40	10 6.7
12	11	39 53	13 53.7
15	10	40 6	9 54.2
15	10½	40 53	10 6.3
15	11	41 46	9 59.1
15	12½	41 58	10 2.8
15	11½	42 23	10 6.9
15	9	42 59	10 9.3
15	11½	43 57	10 2.7
15	11½	44 0	10 4.8
15	11	44 36	10 1.5
15	11½	45 0	10 4.9
15	11½	45 35	10 1.7
15	11½	45 40	10 3.4
15	12	46 7	9 56.1
15	10½	46 11	9 53.2
15	12	47 39	10 6.6
15	11½	47 41	10 8.7
15	11	47 47	10 0.6*
15	11½	49 6	9 51.8
15	11½	49 10	9 56.5
15	11	49 31	10 9.5
15	11½	50 25	9 49.7
15	11	50 39	10 1.8
15	10	51 2	9 47.3
15	9½	52 5	9 53.6
15	10	52 49	10 0.7
15	10	53 3	9 50.4
15	12	53 8	9 56.1
15	11½	21 54 23	—10 6.4
15	10	21 54 33	—9 53.5
15	11	55 31	10 2.6
15	12	55 40	9 55.7
15	12	55 43	9 53.4
15	11½	55 49	9 56.0
15	10	57 11	10 5.2
16	11½	57 19	11 37.6
15	11	57 35	9 53.1
16	11	57 37	11 49.5
16	11	57 48	11 47.4†
16	10	59 4	11 42.2*
15	10½	21 59 14	9 54.6
15	10	22 0 8	10 5.8
15	11	0 12	9 53.2‡
15	11	0 50	10 6.7
18	10½	0 55	13 47.3
15	11	0 57	10 6.9
15	11	1 10	9 51.5
15	12	1 58	9 54.2
15	11½	1 58	9 47.6
15	10	2 58	10 8.8
18	10½	3 8	13 35.7
15	10	3 15	10 4.9
15	11½	3 55	9 56.8
15	10½	4 3	10 7.7
18	10	4 16	13 44.7
18	11	5 0	13 44.1
15	11	5 1	10 7.9
17	12	5 40	13 52.8
15	11	5 49	9 56.5
15	11½	6 21	9 54.3
16	9½	7 20	11 44.8
15	11½	7 24	9 54.8
15	11½	8 2	9 58.1
15	11½	22 8 23	—9 57.9

* (4). † *f.* of double. ‡ 11th S. p.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
16	11½	22 8 37	—11 39.1	15	11	22 17 50	—10 9.8
15	11½	9 43	9 57.1	16	11	17 58	11 44.1
16	11½	9 48	11 36.3	17	12	18 34	13 53.2
16	11½	9 53	11 36.6	15	12	18 46	10 6.8
15	12	9 58	9 54.1	17	11½	19 1	14 9.3
16	12	10 14	11 35.6	15	11	19 8	9 52.8
16	12	10 19	11 35.7	15	11½	19 11	10 4.7
15	10	10 59	10 2.1	16	11	19 17	11 41.9
16	10	11 17	11 32.5	16	10	19 20	11 36.3
15	12	11 19	9 54.9	15	12	19 22	9 57.9
15	12	11 33	10 2.1	18	12	19 26	13 39.3
16	11½	12 27	11 36.1	15	11½	19 27	9 58.4
15	11½	12 41	9 47.5	16	11½	19 27	11 40.1
15	10½	12 48	10 3.4	18	11½	19 36	13 43.8
17	12	12 54	13 49.4	17	11½	20 13	14 7.2
18	11½	13 19	13 49.8	17	11½	20 41	14 7.9
17 18	11	13 53	13 48.1	17	11½	20 50	13 58.8
15	10½	13 55	10 5.7	15	11	20 56	9 56.7
15	9½	14 16	10 6.4	16	9½	20 56	11 39.6
15	11	14 38	9 54.2	17	11½	21 10	14 3.2
17	11½	14 46	13 54.0	15	12	21 23	10 5.9
15	11½	14 49	9 51.4	17	10½	21 30	14 1.6*
17	11½	15 4	13 51.6	15	11½	21 42	10 5.3
17	11½	15 13	13 52.7	18	10½	21 46	13 47.9
15	12	15 23	10 7.6	17	11	21 48	13 58.2
17	10½	15 35	13 53.3	16	11	22 11	11 33.2
18	11	15 50	13 34.5	18	12	22 50	13 44.2
15	11	15 56	10 4.4	18	11½	22 59	13 48.6
16	12½	16 1	11 38.3	16	10	23 13	11 47.4
15	10	16 54	10 4.1	16	12	23 17	11 44.3
15	10½	16 54	10 5.2	18	12	23 22	13 44.4
18	10	17 4	13 46.3:	15	10½	23 29	10 1.9*
18	12	17 7	13 42.4	18	10	23 29	13 43.1
16	12	17 27	11 45.7	15	9	23 38	10 2.8
16	11½	22 17 28	—11 38.4	17	11	22 23 43	—13 52.0

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
16	10½	22 23 53	—11 38.8	15	11½	22 30 49	—9 54.4
18	11½	24 12	13 37.0	16	10	31 7	11 46.5
18	11	24 45	13 31.3	17	12½	31 23	13 57.6
17	11	25 1	13 57.8*	17	12½	31 33	13 58.3
17	10½	25 3	13 58.2†	16	11½	31 36	11 49.6
18	11	25 7	13 39.0‡	16	12	31 48	11 39.5
17	10½	25 11	14 8.0	15	11	32 4	9 51.4
17	10	25 47	13 55.2	17	12	32 54	13 53.1
18	10	25 51	13 44.0	17	11	32 59	13 52.7
18	10½	25 52	13 30.8	17	12½	33 20	13 56.7
15	9½	26 40	9 54.6	16	11	33 41	11 52.2
16	12	26 44	11 33.2	17	11	34 2	14 3.4
16	10½	26 46	11 42.5	16	11½	34 21	11 49.2
16	10½	26 47	11 43.3	15	11½	34 22	10 5.2
16	10½	26 49	11 40.2	17	10	34 42	13 53.8
16	10½	27 2	11 32.8	17	12	34 59	13 52.5
15	9½	27 6	10 0.9‡	16	10½	35 1	11 43.3
18	11	27 37	13 39.8	17	11	35 10	13 54.5
17	12	27 38	13 52.5	16	10½	35 24	11 34.4
17	12	27 47	13 51.7	15	11	35 25	9 57.6
17	10	27 50	13 48.0:	17	11	35 29	13 48.4
18	10	28 16	13 42.8	15	11½	35 37	10 2.4
16	11½	28 34	11 44.9	17	11	35 39	13 56.9
17	10½	28 36	14 6.8	15	10½	35 48	9 54.6
17	12	28 47	14 6.0	17	11	35 58	14 7.6
16	10	28 52	11 49.4	17	10	36 26	13 55.6
15	12	28 54	10 6.5	16	10	36 28	11 42.0
16	10	29 3	11 48.8	17	10	36 38	13 51.0
15	11	29 40	9 53.5	15	10	36 46	9 48.1
15	11	29 47	10 4.5	15	10	37 1	10 1.6
16	10½	29 56	11 43.4	17	12	37 2	13 55.6
15	11	30 18	10 3.6	16	10½	37 41	11 42.1
16	11	30 36	11 46.2	16	12	37 43	11 50.0
16	11	30 39	11 45.4	16	11½	38 56	11 33.8
15	10	22 30 49	—9 55.7	15	8½	22 39 6	—10 5.0

* N. *p.* of double. † S. *f.* of double. ‡ (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
15	9½	22 39 8	—10 1.6*	16	12	22 48 37	—11 35.3
16	11½	39 16	11 33.1	15	12	48 43	9 52.7
15	11½	39 22	10 6.7	15	11	48 48	10 2.0*
15	11½	39 26	10 5.7	16	11½	48 53	11 35.8
16	11	39 26	11 34.7	16	11½	49 17	11 50.1
16	12	39 53	11 33.5	15	11	49 32	9 53.9
16	11½	40 6	11 34.4	16	11	49 51	11 40.2
15	11	40 24	10 7.7	15	11	50 10	9 52.3
16	10	40 28	11 29.7	16	11½	50 27	11 40.4*
15	9	40 35	9 51.0	15	11	50 38	9 53.6
15	10½	40 45	10 3.2	15	9½	51 5	9 53.8
16	10½	41 24	11 39.3	18	11	51 7	7 58.2
16	11½	41 42	11 40.4	15	11½	51 22	9 53.6
16	9	41 43	11 46.3	15	10½	51 24	10 2.5
15	9	41 50	9 50.9	15	10	52 0	9 56.9
15	10½	42 9	10 1.3	16	11	52 11	11 49.7
15	12	42 11	9 52.7	15	10	52 46	10 9.8
16	11	42 36	11 34.8	16	10½	53 1	11 49.0
15	11½	42 43	10 8.6	15	10½	53 45	10 2.2
15	11	43 14	10 7.6	16	10½	53 56	11 47.6
16	9½	43 35	11 46.2	15	9½	54 5	10 3.2
15	11½	43 47	10 6.9	16	11½	54 7	11 45.4
15	11	44 4	10 6.7	15	11	54 8	9 48.5
15	11½	44 9	10 6.7	15	11	54 30	10 9.2
16	11½	44 19	11 31.6	16	11	55 14	11 39.0
16	11	44 28	11 33.0	18	11	55 16	7 58.6†
15	10½	44 59	9 59.1	16	10	55 19	11 49.7
15	11	45 15	10 1.8	15	11½	55 20	10 9.1
16	9½	45 19	11 28.4	16	10	55 21	11 52.5
15	9½	46 14	10 11.2	16	11	55 28	11 42.8*
16	11½	46 22	11 45.5	15	11	55 32	9 59.4*
16	11½	46 53	11 38.4	16	11	56 18	11 43.0
15	10½	47 29	9 50.6	16	11	56 45	11 46.2
16	11½	47 49	11 35.7	17	10½	56 51	8 29.1
15	11	22 48 37	—10 2.1*	15	11	22 57 28	—10 8.3

* (4). † S. *f.* of double. ? Same as October 31st, 1848.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
16	10½	22 23 53	—11 38.8	15	11½	22 30 49	—9 54.4
18	11½	24 12	13 37.0	16	10	31 7	11 46.5
18	11	24 45	13 31.3	17	12½	31 23	13 57.6
17	11	25 1	13 57.8*	17	12½	31 33	13 58.3
17	10½	25 3	13 58.2†	16	11½	31 36	11 49.6
18	11	25 7	13 39.0‡	16	12	31 48	11 39.5
17	10½	25 11	14 8.0	15	11	32 4	9 51.4
17	10	25 47	13 55.2	17	12	32 54	13 53.1
18	10	25 51	13 44.0	17	11	32 59	13 52.7
18	10½	25 52	13 30.8	17	12½	33 20	13 56.7
15	9½	26 40	9 54.6	16	11	33 41	11 52.2
16	12	26 44	11 33.2	17	11	34 2	14 3.4
16	10½	26 46	11 42.5	16	11½	34 21	11 49.2
16	10½	26 47	11 43.3	15	11½	34 22	10 5.2
16	10½	26 49	11 40.2	17	10	34 42	13 53.8
16	10½	27 2	11 32.8	17	12	34 59	13 52.5
15	9½	27 6	10 0.9‡	16	10½	35 1	11 43.3
18	11	27 37	13 39.8	17	11	35 10	13 54.5
17	12	27 38	13 52.5	16	10½	35 24	11 34.4
17	12	27 47	13 51.7	15	11	35 25	9 57.6
17	10	27 50	13 48.0:	17	11	35 29	13 48.4
18	10	28 16	13 42.8	15	11½	35 37	10 2.4
16	11½	28 34	11 44.9	17	11	35 39	13 56.9
17	10½	28 36	14 6.8	15	10½	35 48	9 54.6
17	12	28 47	14 6.0	17	11	35 58	14 7.6
16	10	28 52	11 49.4	17	10	36 26	13 55.6
15	12	28 54	10 6.5	16	10	36 28	11 42.0
16	10	29 3	11 48.8	17	10	36 38	13 51.0
15	11	29 40	9 53.5	15	10	36 46	9 48.1
15	11	29 47	10 4.5	15	10	37 1	10 1.6
16	10½	29 56	11 43.4	17	12	37 2	13 55.6
15	11	30 18	10 3.6	16	10½	37 41	11 42.1
16	11	30 36	11 46.2	16	12	37 43	11 50.0
16	11	30 39	11 45.4	16	11½	38 56	11 33.8
15	10	22 30 49	—9 55.7	15	8½	22 39 6	—10 5.0

* N. *p.* of double. † S. *f.* of double. ‡ (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
15	9½	22 39 8	—10 1.6*	16	12	22 48 37	—11 35.3
16	11½	39 16	11 33.1	15	12	48 43	9 52.7
15	11½	39 22	10 6.7	15	11	48 48	10 2.0*
15	11½	39 26	10 5.7	16	11½	48 53	11 35.8
16	11	39 26	11 34.7	16	11½	49 17	11 50.1
16	12	39 53	11 33.5	15	11	49 32	9 53.9
16	11½	40 6	11 34.4	16	11	49 51	11 40.2
15	11	40 24	10 7.7	15	11	50 10	9 52.3
16	10	40 28	11 29.7	16	11½	50 27	11 40.4*
15	9	40 35	9 51.0	15	11	50 38	9 53.6
15	10½	40 45	10 3.2	15	9½	51 5	9 53.8
16	10½	41 24	11 39.3	18	11	51 7	7 58.2
16	11½	41 42	11 40.4	15	11½	51 22	9 53.6
16	9	41 43	11 46.3	15	10½	51 24	10 2.5
15	9	41 50	9 50.9	15	10	52 0	9 56.9
15	10½	42 9	10 1.3	16	11	52 11	11 49.7
15	12	42 11	9 52.7	15	10	52 46	10 9.8
16	11	42 36	11 34.8	16	10½	53 1	11 49.0
15	11½	42 43	10 8.6	15	10½	53 45	10 2.2
15	11	43 14	10 7.6	16	10½	53 56	11 47.6
16	9½	43 35	11 46.2	15	9½	54 5	10 3.2
15	11½	43 47	10 6.9	16	11½	54 7	11 45.4
15	11	44 4	10 6.7	15	11	54 8	9 48.5
15	11½	44 9	10 6.7	15	11	54 30	10 9.2
16	11½	44 19	11 31.6	16	11	55 14	11 39.0
16	11	44 28	11 33.0	18	11	55 16	7 58.6†
15	10½	44 59	9 59.1	16	10	55 19	11 49.7
15	11	45 15	10 1.8	15	11½	55 20	10 9.1
16	9½	45 19	11 28.4	16	10	55 21	11 52.5
15	9½	46 14	10 11.2	16	11	55 28	11 42.8*
16	11½	46 22	11 45.5	15	11	55 32	9 59.4*
16	11½	46 53	11 38.4	16	11	56 18	11 43.0
15	10½	47 29	9 50.6	16	11	56 45	11 46.2
16	11½	47 49	11 35.7	17	10½	56 51	8 29.1
15	11	22 48 37	—10 2.1*	15	11	22 57 28	—10 8.3

* (4). † S. *f.* of double. ? Same as October 31st, 1848.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
15	10½	22 57 33	—10 2.0	15	11	23 3 37	—10 7.2
15	10½	57 58	10 3.2	18	10	4 27	7 52.3
16	11	58 5	11 44.3	17	12	4 29	8 12.5
15	9	58 24	10 4.9	18	11	4 40	8 7.5
16	10½	58 58	11 48.5	17	12	4 41	8 12.1
18	11	59 2	7 54.5	17	12	4 50	8 15.6
17	11	59 4	8 29.7	18	10	4 59	7 52.0
17	10½	22 59 49	8 22.7	18	11	5 10	8 1.7
16	12	23 0 0	11 33.8	18	10½	5 20	8 7.4
17	12½	0 8	8 12.0	18	11	5 42	7 51.4
16	10½	0 9	11 39.5	17	10½	5 53	8 28.6
16	11½	0 21	11 38.8	17	10½	6 17	8 15.4
18	12	0 23	8 4.3	17	9½	6 31	8 29.8
15	10	0 38	9 56.7	18	11½	6 46	7 58.1
18	9	0 41	8 3.5:	18	10½	7 1	7 53.8
18	11½	0 43	8 4 3:	17	8	7 3	8 31.1
18	12	0 51	8 4.3	17	10	7 10	8 15.6
17	10	1 1	8 28.3	18	9½	7 24	8 4.0
17	10½	1 13	8 19.0	18	11	7 24	8 6.3
16	10	1 25	11 32.8	17	10½	8 28	8 13.3
15	11	1 47	9 59.0*	17	9½	8 59	8 24.4
17	11	2 22	8 27.6	17	12	10 18	8 18.7
15	11	2 25	9 57.3	18	11	11 11	7 51.4
15	10½	2 48	10 4.1	18	11½	11 12	8 8.1
17	11	2 57	8 23.9	17	12½	11 36	8 24.2
17	12½	2 57	8 27.7	17	11	11 43	8 27.4
18	12	2 57	8 6.8	17	12	12 1	8 21.3
17	9½	3 5	8 27.2::	18	12	12 5	7 52.3
16	12	3 11	11 39.5	18	10½	12 7	7 54.9
16	10	3 11	11 45.5	18	11	12 8	8 11.4
18	10½	3 18	8 7.2	17	10½	12 45	8 18.5
18	12	3 32	7 53.3	18	11½	12 51	8 3.2
16	12	23 3 36	—11 45.5	18	11	23 13 27	—7 57.1

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
18	8	23 13 29	—7 50.7	17	12½	23 22 44	—8 12.4
17	12½	14 7	8 23.5	18	10	22 46	8 6.3
17	12	14 19	8 18.0	17	12½	23 12	8 13.9
18	9	14 44	8 3.8	18	12	23 15	8 9.3
17	12	15 23	8 27.0	17	11½	23 55	8 13.6
18	12	15 30	8 7.0	17	12	23 55	8 29.5
18	11	15 46	8 4.8	18	11	23 57	7 53.3
18	11	16 4	8 1.6*	18	11½	24 22	8 2.1
17	11½	16 19	8 14.7	17	12	24 54	8 30.4
17	11	16 34	8 15.6	17	12	25 7	8 29.1:
18	10	17 10	8 9.0	18	11½	25 22	8 9.5
17	11	17 11	8 9.1	18	12½	25 42	8 9.1:
18	9	17 23	7 48.6	18	11½	25 55	8 7.8
18	12	17 24	8 2.6	17	11½	26 4	8 24.0
17	12	17 46	8 12.9	17	12	26 9	8 16.1
17	11	17 54	8 16.3	17	12	26 28	8 18.1
17	11½	18 5	8 27.1	17	12	26 30	8 22.9
18	9½	18 21	7 57.7†	18	9½	27 47	7 58.9‡
17	11	18 52	8 15.1	18	11½	27 59	7 58.9§
17	11½	19 3	8 12.8	17	12	28 38	8 13.5
18	10	19 11	7 51.8	17	12	28 39	8 11.7
18	9	19 52	7 47.6	17	12	28 46	8 12.3
18	9½	20 48	7 49.4	18	10	29 3	7 58.7‡
18	12	20 58	7 58.5	17	11	29 36	8 17.7
17	9	21 11	8 13.6	18	11½	29 58	8 6.3
17	12	21 14	8 12.6	18	11	30 50	7 47.6
18	12	21 22	7 50.9	18	11½	30 52	7 52.9
18	12	21 28	7 48.6	18	11½	30 53	8 2.1
17	11	21 35	8 19.6	17	10	31 45	8 20.7
17	11	22 0	8 10.4	17	10½	31 56	8 21.4
18	10	22 6	8 12.1	17	10	32 51	8 25.1
18	10½	22 11	8 6.3	18	10½	32 56	8 0.9‡
17	12½	23 22 24	—8 12.0	18	12	23 33 1	—8 8.6

* S. *f.* of double. † N. *p.* of a close double. ‡ (4). § Double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
18	12	23 33 6	—8 5.1	18	12	23 35 14	— 7 57.6
17	11	34 5	8 28.2	17	9½	35 20	8 20.0
17	12	34 16	8 22.4	18	10	35 35	8 4.7
17	10	34 16	8 27.3	17	11	23 35 56	—8 9.7
18	10	23 34 56	—8 2.2				

NOTES.—12th—Between α 20h. 59m. and 21h. 40m. Moon troublesome, and some haze in the south.

13th—Between α 20h. 4m. and 20h. 56m. This set good. Moon troublesome during the last ten minutes.

„ Between α 21h. 3m. and 21h. 35m., good sky, but strong moonlight.

15th—Between α 21h. 27m. and 23h. 4m. Moon troublesome for the last half-hour. Fog has risen.

18th—At α 22h. 28m., clouds.

„ At α 23h. 35m., hazy; fog rising.

23rd—Stopped by fog.

APPROXIMATE MEAN PLACES, FOR JANUARY 1, 1850,

OF

597 STARS NEAR THE ECLIPTIC,

OBSERVED IN OCTOBER, 1851, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	°			h. m. s.	° ′
1	10½	20 29 28	—14 5.4	1	10½	20 33 26	—13 53.0
1	10½	29 40	14 4.7	1	11	33 50	14 9.8
1	10	29 50	13 54.1	1	11	34 5	14 9.3
1	10½	30 9	13 54.7	1	11	34 14	13 51.5
1	10½	30 58	14 1.1	1	10	35 18	13 58.2*
1	12	31 0	14 11.9	1	10½	35 57	13 56.4
1	10½	31 8	14 0.9	1	10½	35 59	13 55.7
1	11	31 42	14 7.8	1	10	37 5	13 54.9
1	11	33 1	14 4.2	1	11	37 14	14 5.8
1	10½	20 33 24	—14 4.3	1	11½	20 37 32	—13 56.7

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
1	10	20 38 33	—14 12.6	11	11	21 4 35	—13 24.8
1	10½	38 57	14 0.1	13	11½	4 45	12 7.9
1	9½	39 37	14 7.5	11	9	4 55	13 24.2
1	9	40 0	14 2.3	1	12½	5 21	12 12.7
1	8½	44 30	13 47.6	13	10	5 29	12 0.6
1	10½	44 33	13 57.9	13	10½	5 34	12 4.2
1	9½	44 41	13 51.7	13	10½	5 42	12 1.7
1	10	45 32	13 53.0	11	10	5 54	13 12.2
1	12	45 37	13 50.9	11	10	5 59	13 17.6
1	9½	46 27	14 2.1	11	11½	6 28	13 17.4
1	9½	46 32	14 1.8	1	10	6 54	12 27.6
1	12	46 49	13 59.3	13	10	7 4	12 5.9
1	10½	47 16	14 2.0*	13	11½	7 10	12 3.5
1	10	47 52	14 5.3	1	11	7 27	12 42.7
1	12	49 5	13 56.5	13	11	7 31	11 53.7
1	12	49 9	13 58.2	13	11	7 46	12 5.3
1	12	49 14	13 55.5	11	11	7 47	13 14.8
1	10	49 46	13 58.7	11	11½	7 48	13 17.1
1	10	49 48	13 56.7	13	10½	8 6	12 8.8
13	10	59 5	11 57.3	11	12	8 8	13 15.8
13	12	59 17	11 57.9	13	12½	8 56	11 56.9
1	11	59 30	12 21.5	1	11½	9 1	12 21.9
13	9½	20 59 45	12 6.7	13	12	9 5	11 56.9
13	11½	21 0 24	12 7.0	13	12	9 10	11 57.4
1 13	11	0 29	12 9.0	11	12	9 24	13 27.0:
1	11	0 52	12 29.6	11	12	9 26	13 27.6:
13	11	1 22	11 50.5	13	10½	9 26	11 58.1
11	11½	1 58	13 15.8	1	11	10 17	12 11.2
11	12	2 5	13 13.5	11	8	10 22	13 13.3
13	11	2 20	11 55.4	13	11	10 30	12 1.7
1	11½	2 30	12 25.4	13	11	10 41	11 52.8
11	11½	3 11	13 24.4	11	11½	10 58	13 24.6
11	10	3 21	13 28.7	11	10	11 9	13 18.8*
11	12	3 38	13 27.2	11	9	11 25	13 26.4
13	11	21 4 22	—12 7.6	1	12	21 11 37	—12 29.4

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
11	10	21 11 41	—13 26.9	13	9	21 21 47	—11 52.8
13	11	11 54	11 57.7	13	11½	22 10	11 50.5
13	11	12 3	12 3.6*	11	11	22 24	13 24.4
1	10½	12 51	12 22.4†	13	9½	22 27	12 9.2
13	10	12 59	12 8.9	13	9½	22 42	11 50.3
11	12	13 12	13 16.5	13	9½	22 44	12 1.6
11	11	13 31	13 11.2	11	11	23 2	13 25.6
11	11½	14 35	13 28.0	13	9½	23 29	12 3.8
11	9	14 46	13 24.2	1	11	23 37	12 26.0
13	10½	15 7	11 57.2	11	9	23 48	13 25.6
11	10½	15 13	13 21.4	13	11	23 56	12 1.3
1	12	15 33	12 28.3	13	11½	24 7	12 4.4
11	11	15 39	13 27.7	13	11½	24 23	11 51.8
13	10½	15 45	12 6.1	11	12	24 40	13 28.2
13	11	16 9	12 9.2	13	11½	25 26	11 1.3
13	10	16 29	12 7.3	11	10½	25 33	13 15.7
11	11½	16 33	13 25.9	13	12	25 33	12 4.1
13	11	16 36	12 9.3	13	11	25 33	12 7.0
11	10½	16 41	13 24.4	11	11	26 2	13 17.1
11	10	17 21	13 28.0	1	11	26 35	12 17.9
13	11	17 34	11 53.6	11	10	26 38	13 13.8
13	11	17 35	11 53.3	11	11	26 40	13 14.3
1	10	17 42	12 17.9	11	10	27 8	13 23.2
11	11½	17 44	13 13.8	13	11½	27 9	12 3.9:
1	10	17 55	12 30.9	13	10	27 10	12 3.8:
13	9	18 0	12 4.8	13	11½	27 36	11 53.0
11	11	18 28	13 25.9	13	11	27 54	11 55.7
11	9½	19 41	13 16.6	11	11½	27 58	13 23.1
1	9½	19 51	12 28.6	13	10	28 30	12 4.3
13	11	20 0	11 54.2	11	9	28 47	13 14.2
13	11	20 10	12 4.1	13	10½	28 59	11 57.5
13	11½	20 16	12 4.7	1	10	29 6	12 25.0
1 13	10	20 58	12 8.0‡	1	11	29 12	12 28.8
11	9½	21 13	13 25.5	11	10½	29 40	13 25.7
13	9	21 21 30	—12 6.6	1	11½	21 30 20	—12 14.7

* *p.* of double. † (4). ‡ Double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
1	10	21 30 33	—12 19.4*	30	11½	22 3 22	—12 42.3
13	10	30 35	12 6.5	30	12	3 23	12 44.5
1	12	30 59	12 24.5	1	9½	4 11	12 20.0
11	11	31 21	13 17.3	30	11	4 45	12 27.3
1	11	31 23	12 14.3	30	10	4 47	12 31.9
13	11	31 26	11 54.5	1	12	5 51	12 12.1
11	8	31 30	13 18.0*	30	11	6 5	12 38.0*
13	9	31 40	11 54.0	30	11	6 56	12 38.8
13	8	31 44	11 51.2	1	12	7 14	12 16.5
11	12	31 56	13 17.5	30	10½	7 42	12 36.4*
1	11½	32 4	12 28.6†	30	11	8 0	12 36.5
13	9	32 20	12 5.2	2	11½	8 14	13 18.3
1	10½	32 26	12 29.2	2	11½	8 16	13 15.6
1	11½	33 0	12 25.8	30	10½	8 55	12 39.1
1	9½	33 18	12 26.3	11	10½	9 5	12 7.0
13	10½	33 23	12 11.1	1	11½	9 28	12 26.6
1	9	33 37	12 24.6	2	12	10 10	13 28.1
1	10½	33 49	12 19.8	30	11	10 16	12 44.0
11	11	33 52	13 28.9	1	11½	10 49	12 24.5
11	10½	34 13	13 31.8	2	12	10 50	13 27.5
13	10½	34 17	12 1.2	2	12	11 1	13 25. 3
11	11	34 21	13 22.6	11	11	11 59	12 5.5
1	10½	35 27	12 12.8	1	12	12 31	12 22.4:
11	11	36 33	13 16.0	1	11½	13 55	13 23.3
1	11½	37 16	12 30.9	2	11	14 4	13 21.2
1	11	38 30	12 27.3	1	10½	14 11	12 21.7
1	10½	38 45	12 29.1	1	12	15 32	12 18.3‡
11	11½	38 53	13 16.0	1	10	15 42	12 15.5
11	9½	39 33	13 15.7	11	12	16 1	11 52.2§
1	9½	39 56	12 19.8	2	11	16 29	13 8.0
1	9½	40 3	12 28.5	1	10½	16 36	12 19.8*
11	11	41 1	13 25.9	1	11½	16 36	12 19.0
11	11½	41 21	13 26.2	2	11	17 23	13 26.4
1	11½	42 11	12 18.9	1	10	17 43	12 12.2
1	11	21 42 24	—12 25.2	1	10	22 17 54	—12 26.5

* (4). † ? 42, 188 H. C. ‡ N. *p.* of double. § A 12th N. *p.*

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
2	11	22 18 2	−13 9.4*	1	9½	22 25 39	−12 18.3
2	10	18 16	13 18.2	11	11	25 45	12 11.2
11	12	18 52	11 54.2	1	11	25 59	12 22.8
1	11½	19 9	12 21.5	2	11½	26 13	13 12.1
2	12	19 14	13 17.0	11	10	26 30	12 3.9
2	9	19 15	13 14.2	1	10	26 31	12 17.1
1	12	19 17	12 12.6	11	12	26 39	12 1.2
1	12	19 19	12 14.0	11	10½	26 40	11 56.7
2	10½	19 41	13 12.8	11	9½	26 40	12 9.1
1	11½	19 48	12 16.1	11	11	27 0	12 8.1
2	10	19 51	13 17.6	2	11	27 4	13 15.4
1	10½	19 56	12 13.6	11	9	27 10	12 0.5
1	11½	20 10	12 16.2	2	11	27 25	13 22.0
2	11	20 21	13 11.3	1	11½	27 39	12 29.2
1	11½	20 43	12 27.9	1	10	28 29	12 32.6
2	9½	21 8	13 16.5	1	12	28 34	12 22.6
2	9½	21 23	13 11.6	1	11	28 34	12 26.4
2	11	21 53	13 12.4	11	11	29 1	12 2.6
11	12	22 13	11 55.9	2	11	29 4	13 19.2
1	10½	22 17	12 24.3	2	11½	29 11	13 12.9
2	11½	22 44	13 22.4	1	10	29 34	12 13.9
2	12	23 3	13 28.5	1	11	29 55	12 18.5
11	10	23 15	11 52.9	11	11	30 18	11 52.1
1	11	23 40	12 22.2	11	11	30 32	12 2.8
2	11	23 47	13 19.3	1	10½	30 39	12 11.7
1	10	23 54	12 19.4†	1	10½	30 40	12 13.6
1	11	24 10	12 13.8	1	11	31 38	12 24.5
11	12	24 19	11 59.2	1	11½	31 38	12 26.9
2	11	24 20	13 23.7	11	12	31 52	11 57.3
2	11	24 27	13 25.9	11	11½	32 18	12 8.2
11	12	24 28	12 2.8	1	10	32 39	12 32.5
1	10	25 2	12 29.0	11	11	32 53	11 59.1
11	11	25 6	11 55.3	1	12	33 55	12 25.1
1	10	25 20	12 27.0	1	9	34 14	12 16.6
1	10½	22 25 23	−12 27.1	11	11	22 34 22	−12 7.4

* N. of a triple. † (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	o ′			h. m. s.	o ′
I	II	22 34 42	—12 26.4	II	II	23 16 41	—7 47.1
II	IO	34 50	11 56.7	II	IO	16 44	7 31.5
I	8½	35 4	12 13.7	II	II	17 36	7 50.2
II	II	35 12	11 56.8	II	II	18 38	7 33.2
II	IO	35 50	11 53.7	II	II	18 47	7 43.6
I	9½	35 52	12 32.7	II	II½	18 51	7 33.4
II	IO½	36 0	11 54.5	II	II	20 42	7 38.6
I	II	36 17	12 12.4	II	II	22 5	7 36.4
II	II½	47 55	7 47.7	II	II½	22 18	7 35.4
II	IO½	48 52	7 43.9	II	II	24 32	7 43.2
II	IO½	49 5	7 32.4	II	II	24 47	7 35.6
II	I2	50 4	7 37.3	II	IO	25 36	7 35.1
II	II½	50 33	7 36.6	II	IO½	25 39	7 48.0
II	II½	50 35	7 34.2	II	II½	27 31	7 31.7
II	II	50 53	7 35.1	II	II½	27 40	7 36.5
II	II	51 46	7 50.4	II	II	27 54	7 49.2
II	IO	53 8	7 39.9:	II	IO½	28 13	7 39.8
II	IO	54 58	7 44.4	II	9½	29 12	7 32.5
II	IO½	55 0	7 41.5*	II	II	29 53	7 39.3
II	IO½	55 43	7 35.0	II	IO	31 29	7 47.6
II	II½	56 54	7 33.5	II	II	23 31 59	—7 35.9
II	II	57 6	7 48.0	23	II	0 37 26	+2 58.2
II	9	58 37	7 38.1	23	II½	37 50	2 55.0
II	IO	22 59 9	7 41.7*	23	I2	38 33	2 55.0
II	II½	23 1 8	7 48.2	23	9½	38 41	2 58.4
II	II	3 42	7 46.8	23	9½	39 6	2 59.2
II	IO½	4 17	7 43.1	23	9½	40 24	2 59.0
II	IO	4 26	7 34.3	23	II½	40 32	2 58.3
II	II	5 56	7 48.5	23	IO	42 14	3 7.9
II	9	6 28	7 38.5	23	IO½	42 43	2 54.0
II	IO½	I2 15	7 31.1	23	IO½	42 44	3 5.3
II	II	I3 19	7 39.5	23	IO	42 49	3 3.1
II	II	I4 23	7 43.4	23	8½	45 8	3 0.3†
II	II½	I6 21	7 33.1	23	II½	45 38	3 3.3
II	II	23 16 36	—7 47.2	23	IO	0 46 4	+2 59.9

* (4).

† (4) M. C.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
23	9½	0 46 5	+2 53.9	23	9½	1 1 15	+3 6.7
23	11	46 47	3 11.9	23	10	2 56	2 55.6:
23	12	47 12	3 8.9	23	10½	3 10	2 56.1
23	10	47 45	3 2.2*	23	11½	3 22	2 57.3
23	1	47 59	3 6.7†	23	11	3 26	2 56.5§
23	12	48 20	3 6.7	23	12	27 24	12 11.1
23	10½	49 16	3 6.0	23	12½	27 45	12 12.6
23	9½	49 42	3 6.9‡	23	10	28 27	12 23.6
23	11	49 48	2 59.0	23	10	28 30	12 25.4
23	11	49 52	2 57.0	23	11	28 58	12 13.5
23	10	50 25	2 57.9	23	9½	29 17	12 28.9
23	10½	50 29	2 55.7	23	10	29 24	12 22.7
23	11	51 20	3 7.4	23	10	29 53	12 25.5
23	11	51 38	3 5.3	23	12	30 1	12 25.7
23	11	51 57	2 58.4	23	10½	31 19	12 19.3
23	10	52 20	2 56.8	23	11	31 40	12 26.5
23	9½	52 20	3 3.4	23	9½	32 27	12 16.9
23	9½	53 36	3 2.7	23	10	32 30	12 11.5
23	10½	54 6	3 2.5	23	9½	32 31	12 15.3
23	9½	55 23	3 0.4*	23	11	34 7	12 25.4
23	1	55 35	2 58.3	23	11½	34 41	12 21.9
23	10	56 1	3 2.3	23	12	36 15	12 28.6
23	9½	56 21	3 3.5	23	11	36 34	12 10.4
23	11	57 0	2 53.7	23	11	36 47	12 13.0
23	11	57 6	3 6.2	23	10	36 55	12 17.2
23	8½	57 9	3 3.8*	23	10	38 19	12 18.6
23	9	57 28	2 55.2	23	11	38 27	12 24.7
23	10	58 21	3 11.9	23	11	38 58	12 25.8
23	11	58 46	3 7.4	23	11	39 4	12 25.9
23	11	59 12	2 57.0	23	10½	39 26	12 26.3
23	11	0 59 23	3 11.2	23	10½	40 12	12 32.1
23	12	1 0 49	2 56.3	23	9	40 43	12 11.0
23	11	0 57	2 54.5	23	11½	40 47	12 11.3
23	12	1 1	3 4.6	23	10½	41 19	12 9.1
23	11½	1 1 10	+2 53.9	23	11	1 42 5	+12 12.3

* (4) † S. *f.* of double. ‡ M. C. § N. *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
23	9½	1 42 19	+12 13.8	23	12	1 59 28	+12 14.4
23	9½	43 7	12 17.1	23	9	1 59 46	12 27.3
23	11	43 13	12 24.1	23	11	2 0 46	12 27.6
23	10½	43 35	12 18.4	23	11	0 46	12 29.2
23	11	43 52	12 20.0	23	11	0 50	12 25.7
23	11½	43 53	12 15.1	23	11	1 10	12 26.0
23	11	45 31	12 17.9	23	10	2 10	12 13.6
23	12	45 51	12 16.7	23	11	2 23	12 22.1
23	10	45 56	12 16.1	23	9½	2 44	12 12.5
23	10½	46 6	12 12.5	23	10	4 35	12 19.0
23	9½	46 57	12 10.9	23	8½	4 59	12 20.9*
23	9	47 27	12 14.4	23	11½	5 23	12 28.1†
23	12	47 44	12 25.9	23	11	5 31	12 22.9
23	9	48 7	12 26.7	23	10½	6 42	12 26.0
23	10	48 31	12 12.0	23	10	6 50	12 24.2
23	11½	48 40	12 11.8	23	12	7 14	12 22.8
23	11½	49 19	12 28.4	23	10½	8 11	12 18.9
23	11	49 26	12 29.3	23	11½	8 32	12 17.4
23	10	50 58	12 18.6	23	9½	8 40	12 28.0
23	10	51 20	12 18.2*	23	10	9 22	12 15.5
23	10	51 21	12 21.6*	23	9½	9 52	12 14.4
23	10	51 24	12 28.0	23	10½	10 12	12 15.5
23	11	53 21	12 24.2	23	10	10 56	12 8.8
23	11	53 25	12 25.1	23	11½	11 54	12 12.3
23	11	53 27	12 26.9	23	11	12 10	12 14.8
23	9	53 46	12 18.1	23	12	12 50	12 12.0
23	11	54 17	12 13.8	23	10½	13 32	12 23.6
23	9½	54 18	12 18.9*	23	11½	13 40	12 25.3
23	8	55 52	12 19.1	23	11½	14 1	12 24.0
23	11	55 55	12 23.5	23	11½	14 3	12 21.8
23	8½	55 56	12 21.1	23	10	14 40	12 15.8
23	11½	57 35	12 11.6	23	11	15 22	12 12.6
23	8½	57 39	12 22.2	23	9	15 40	12 29.4
23	12	57 48	12 22.3	23	10½	16 20	12 16.7
23	11	1 59 26	+12 12.9	23	11	2 16 50	+12 16.5

* (4). † N. *f.* of double.

Days Obs.	Mag.	α.	δ.
		h. m. s.	° ′
23	11½	2 17 2	+12 14.9
23	11½	17 9	12 18.3
23	10½	18 26	12 16.6
23	10	18 47	12 22.5
23	10	18 57	12 25.9
23	11	20 36	12 27.7
23	12	21 29	12 25.8
23	12	21 51	12 17.0
23	12	21 52	12 26.3
23	10	22 23	12 13.7
23	10	22 38	12 26.9
23	11	23 9	12 8.6
23	11	23 44	12 15.2
23	11	23 51	12 11.8
23	11½	24 2	12 24.6
23	10	24 3	12 23.7
23	9½	24 22	12 16.8
23	11½	25 4	12 12.3
23	11	25 21	12 12.3
23	11½	26 9	12 13.2
23	12	26 12	12 14.5
23	11	27 14	12 13.8
23	11	27 19	12 18.4
23	11	27 34	12 18.5
23	9	28 4	12 17.1
23	10½	28 36	12 22.4
23	11½	28 48	12 23.8
23	11	29 40	12 27.0
23	10½	29 48	12 25.6
23	9	30 7	12 25.1
23	11	31 8	12 15.3
23	10	31 12	12 16.6
23	11	32 21	12 13.2
23	9½	32 23	12 26.2
23	12	2 33 14	+12 12.5
23	12	2 33 51	+12 13.2
23	9	34 2	12 20.8*
23	11	35 18	12 27.1
23	10½	35 28	12 13.1
23	9½	35 35	12 19.2
23	9½	36 13	12 25.2
23	12	36 19	12 25.3
23	11	37 35	12 14.3
23	9½	37 55	12 12.4:
23	11	38 12	12 13.8
23	11	38 24	12 14.8
23	11½	38 35	12 15.8
23	11	38 55	12 15.9
23	11	39 36	12 23.6
23	11	39 54	12 10.7
23	11	40 59	12 14.9
23	10	41 7	12 18.4
23	11	41 38	12 11.5
23	11	41 55	12 28.5
23	11½	42 28	12 24.1
23	11	42 41	12 24.2
23	9	43 9	12 29.4
23	10	44 14	12 15.4
23	10	44 19	12 13.9
23	10	44 34	12 26.1
23	10	48 1	12 11.1
23	9	48 3	12 16.1
23	11	49 6	12 25.2
23	10	50 23	12 26.4
23	10	50 28	12 29.6:
23	9½	50 39	12 19.1†
23	11½	51 59	12 12.1
23	11½	52 26	12 23.8
23	11	53 20	12 22.0
23	12	2 54 26	+12 13.0

*(4).

†(4) A 12th *f.*

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
23	10	2 54 28	+12 28.7	23	11	2 59 0	+12 30.5
23	10½	55 8	12 14.2	23	11	59 52	12 19.5
23	11	55 20	12 18.2	23	11	2 59 58	12 13.4
23	12	56 25	12 11.7	23	12	3 1 26	12 24.3
23	10½	57 23	12 27.1	23	10	1 52	12 25.7
23	10½	57 28	12 18.2	23	10½	2 5	12 29.6
23	11½	57 40	12 26.7	23	11½	2 28	12 27.6
23	9	58 32	12 28.5	23	11	3 3 26	+12 28.5
23	11	2 58 32	+12 29.1				

NOTES.—2nd—Stopped by clouds.

11th—Between α 22h. 9m. and 23h. 32m., moonlight intense.

13th—Sky covered with thin clouds.

30th—Taken with the new water-eye piece. The power being about 140, that of the comet-eye piece, generally used, being 80.

APPROXIMATE MEAN PLACES FOR JANUARY 1, 1850,

OF

914 STARS NEAR THE ECLIPTIC,

OBSERVED IN NOVEMBER, 1851, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
11	11½	21 23 43	−16 33.1	11	10½	21 29 25	−16 35.2
11	11	23 57	16 34.3	11	11	29 35	16 33.2
11	10	25 12	16 42.5*	11	11	29 39	16 39.1
11	10½	25 39	16 34.4	11	10	30 58	16 46.2
11	11	26 16	16 33.3	11	10	31 7	16 31.8
11	10½	27 4	16 37.7*	11	10	31 33	16 40.8
11	11	27 38	16 30.3	11	11	32 10	16 46.0
11	11	28 20	16 32.9	11	11	32 16	16 41.5
11	11	28 50	16 28.5	11	10½	33 27	16 35.0*
11	11	21 29 17	−16 42.3	11	8½	21 34 19	−16 26.4

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
11	11	21 34 45	—16 36.0	28	11	22 39 23	—6 7.4
11	11	35 29	16 38.5	27	12	39 39	8 46.6
11	11	35 32	16 34.5	28	11	39 47	6 7.6
11	10	36 3	16 44.4	28	10½	39 50	6 10.0
11	11	36 11	16 48.6	28	9½	40 6	6 11.5
11	11½	36 34	16 36.8	27	11	40 9	8 38.8
11	12	37 53	16 37.4	27	10	40 17	8 50.3
11	10½	38 3	16 40.9	28	8½	40 41	6 4.9
11	11	21 44 26	16 30.2	28	11	40 44	5 53.1
27	11½	22 30 46	8 46.3	28	11½	40 50	6 0.2
27	12	31 18	8 43.0	27	12	41 0	8 44.7
27	11	31 38	8 43.7	28	11	41 11	5 54.5
27	10½	32 6	8 36.2	27	11½	41 36	8 47.5
27	10½	32 23	8 36.7	27	12½	41 39	8 44.2
27	11½	32 43	8 44.8	27	12	41 59	8 47.0
27	11½	33 52	8 35.6	28	10	42 3	6 5.7
28	11	34 18	6 1.4	27	11	42 16	8 33.4
28	10½	34 41	5 48.8	28	11½	42 46	6 2.2
28	11	34 42	6 0.6::	28	11	43 3	5 55.0
27	11½	35 11	8 46.0	27	11½	43 4	8 50.8
27	11	35 32	8 36.5	27	10½	43 8	8 44.5
27	11	35 36	8 46.8	27	10½	43 9	8 37.0
28	10	35 51	6 3.1	28	11½	43 11	5 57.2
27	10	36 27	8 43.1	27	11	44 1	8 35.6
27	12	36 44	8 37.5	27	11½	44 14	8 37.5
27	9	36 47	8 37.1	27	11½	44 28	8 34.8
27	10	37 11	8 36.3	28	11	44 40	5 52.8
27	11	37 19	8 38.6	28	12	44 58	5 53.9
27	10½	37 32	8 43.0	27	10½	45 10	8 33.4
28	11	37 35	6 2.3	27	11½	45 18	8 46.4
28	11	37 41	6 3.7	27	11½	45 32	8 45.7
28	11	38 0	6 4.0	27	11½	45 47	8 43.6
27	12	38 11	8 46.6	28	—	45 50	6 7.1
28	10	38 23	6 12.8	27	10½	45 55	8 49.3
27	10½	22 39 21	—8 50.6	28	11	22 46 0	—6 7.2

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
27	9	22 46 9	—5 50.4	27	11½	22 55 52	—8 31.8
28	10	46 42	6 8.9	27	10½	56 5	8 33.7
28	11½	46 55	6 6.3	28	10	56 16	5 54.4
27	12	46 58	8 33.9	28	11	56 33	6 5.8
28	10	46 58	5 52.9	27	11½	56 38	8 35.3
28	11½	46 59	6 1.1	27	9	56 45	8 32.1
28	10½	48 10	6 8.2	28	11	57 16	6 7.5
28	9½	48 18	5 56.4	28	9	57 26	6 3.4
27	10	48 50	8 38.1	28	11	57 47	5 58.4
28	11	49 0	6 8.0	27	10	58 5	8 34.2
28	10	49 27	6 7.6	28	12	58 15	6 11.3
27	9½	49 50	8 52.0	27	10½	58 18	8 46.9
28	10½	50 7	6 4.9	28	11½	58 32	6 9.8
27	11½	50 11	8 53.2	28	11	59 51	5 58.0
28	10	50 24	5 50.5	28	11	59 53	5 52.1
27	11½	50 28	8 33.7	27	10½	22 59 56	8 34.6
27	10½	51 9	8 34.6	28	9	23 0 1	5 54.2
27	10	51 29	8 50.8	27	11	0 7	8 38.6
28	12	51 45	5 54.4	28	9	0 13	6 1.9*
27	11	51 59	8 46.4	27	10½	0 23	8 37.2
28	10	52 0	5 52.4	28	11	1 10	5 54.8
28	9½	52 28	6 11.5	26	9½	1 18	3 21.7
27	10½	52 43	8 37.3	27	11	1 20	8 47.6
28	11	52 43	6 3.9	26	12	1 27	3 22.9
27	11½	53 38	8 43.5	27	11	1 28	8 48.5
28	12	53 58	6 5.0	26	11	1 52	3 19.6
28	9½	53 58	6 7.9	28	10½	2 1	6 9.0
27	10½	53 59	8 43.1	28	11	2 12	5 57.4
28	11½	54 24	6 6.9	28	10	2 50	5 58.2
27	8½	54 33	8 31.8	28	11½	2 53	5 53.8
27	9½	54 57	8 37.7	27	9	3 2	8 36.1
27	10	55 2	8 50.0	28	11	3 3	6 0.2
28	10	55 26	5 52.8	27	11	3 36	8 39.5*
28	10	55 35	5 56.4	26	11	3 38	3 27.7
27	11½	22 55 43	—8 33 8	26	10	23 3 57	—3 17.9

Days Obs.	Mag.	α	δ	Days Obs.	Mag.	α	δ
		h. m. s.	° ′			h. m. s.	° ′
27	10½	23 3 57	—8 52.4	26	9	23 10 15	—3 25.9
27	11	4 2	8 37.1	28	11½	10 29	5 57.8
26	10½	4 6	3 26.2	26	9	10 31	3 28.8
27	12	4 15	8 39.5	27	10½	10 50	8 44.6:
26	11	4 35	3 17.5	27	11½	11 6	8 45.8
28	10½	4 43	6 11.3	28	10½	11 6	5 55.1
26	12	4 47	3 13.5	27	10	11 16	8 39.6*
28	11	5 18	5 51.5	26	9½	11 22	3 13.0
26	10½	5 33	3 13.3	26	9½	11 27	3 29.6
28	11½	5 59	5 58.6	27	10½	11 34	8 51.9
27	9½	6 10	8 34.5	26	11½	12 10	3 27.8
26	11	6 23	3 16.6	26	12	12 12	3 27.2
27	10	6 37	8 39.0	28	11½	12 14	5 59.2
27	10½	6 49	8 47.2	26	12	12 39	3 25.7
26	12	6 55	3 22.5	27	10½	12 46	8 37.2
28	11	6 57	6 7.1	28	11	12 50	6 0.2
26	11	7 4	3 25.2	26	11	12 55	3 15.9
28	10½	7 9	6 11.2	27	10½	13 5	8 49.9
26	10	7 22	3 16.7	26	9	13 15	3 17.4
26	11	7 25	3 22.3	27	11½	13 23	8 42.5
28	11½	7 59	5 56.8	27	12	13 28	8 32.0
26	10	8 12	3 11.5	26	11	13 41	3 17.3
27	11½	8 20	8 43.4	26	11	13 47	3 28.6
27	12	8 25	8 46.1	27	11	13 51	8 35.6
26	11½	8 29	3 14.1	27	11½	14 23	8 47.4
26	11	8 36	3 13.7	26	11	14 32	3 12.4
27	12	8 38	8 34.5	26	11½	14 57	3 28.9
28	11	8 57	5 57.2	28	11½	15 0	5 56.6
28	11	9 11	5 55.0	28	11½	15 6	5 55.7
27	11	9 33	8 42.5	26	12	15 9	3 28.1
26	11	9 50	3 23.7	27	11	15 11	8 48.4
27	9½	9 50	8 45.1	27	11½	15 18	8 43.6
26	11	9 51	3 21.6	26	11	15 49	3 8.0
26	10½	9 57	3 18.2	27	11½	15 55	8 38.6
28	11½	23 9 57	—5 55.2	26	12½	23 16 5	—3 27.7†

* (4).

† 12th. S.f.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
27	9	23 16 9	—8 35.5	26	11½	23 23 7	—3 24.7
26	12	16 32	3 18.0	27	11½	23 18	8 34.1
26	11	17 2	3 27.9	26	11	23 22	3 25.9
28	9½	17 4	5 52.1	26	11	23 24	3 12.9
27	10	17 14	8 32.4:	27	10	23 50	8 32.9
26	12	17 18	3 24.7	27	11½	24 10	8 37.1
26	9	17 31	3 30.0	26	9½	24 26	3 8.6
26	10	17 45	3 29.1	27	9½	24 35	8 34.7
27	11	17 46	8 50.2	26	11	24 43	3 20.7
27	11½	17 56	8 45.6	27	12	24 52	8 35.6
26	11	18 7	3 28.6	26	12	24 54	3 17.7
28	10½	18 7	5 50.9	26	11	25 9	3 26.9
26	10½	18 12	3 16.4	26	10	25 43	3 28.4
26	10½	18 28	3 25.7:	27	11	25 53	8 44.8
27	9½	18 48	8 35.1	27	12	26 11	8 38.4
28	10	18 55	5 49.3	26	12	26 24	3 12.4
26	11½	18 56	3 25.3	27	10	26 31	8 37.9
27	11	18 58	8 40.3	26	11½	26 37	3 11.6
28	12	19 8	6 6.3	26	12	26 44	3 11.3
27	11	19 10	8 33.2	27	9	26 59	8 53.3
27	10	19 13	8 40.2	26	11	27 27	3 28.7
28	10½	20 28	5 57.8	26	11½	27 33	3 29.0
27	12	20 36	8 34.7	26	10½	27 41	3 15.6*
27	12	20 44	8 39.5	26	10½	27 45	3 22.5
27	10½	20 55	8 37.5	26	11	28 5	3 20.0
27	10	21 11	8 38.7	27	9½	28 5	8 45.6
27	12	21 19	8 39.0	27	8	28 27	8 32.5
26	11	21 36	3 28.1	27	9½	28 29	8 37.7
27	8½	21 44	8 38.1	26	11½	29 13	3 15.9
27	10½	22 2	8 49.3	27	10½	29 28	8 32.0
26	11½	22 5	3 22.8	26	12	29 44	3 27.5
26	11½	22 17	3 17.7	27	11	30 0	8 33.9
26	12	22 43	3 15.2	27	10½	30 16	8 42.7
26	12	22 46	3 18.3	27	9	30 17	8 46.4
27	9	23 22 49	—8 35.0	26	10	23 30 39	—3 12.5

* *f.* of double.

Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′
27	10	23 30 41	—8 38.4
27	8½	30 54	8 37.3
26	10½	30 56	3 23.1
26	10½	30 57	3 17.6
26	9	31 31	3 15.9
27	9	31 34	8 48.6
26	11½	31 58	3 27.3
27	12	32 3	8 50.1
26	10½	32 23	3 26.1
26	11½	32 36	3 26.5
27	9½	32 40	8 32.8
27	11½	32 48	8 37.3
26	11	32 51	3 28.4
26	11	33 3	3 17.9
26	11½	33 9	3 14.6
26	11	33 11	3 11.6
26	10	34 20	3 26.2
26	11	34 33	3 25.2
26	12	34 56	3 13.9
26	12	34 57	3 17.1
26	11½	34 58	3 13.6
26	12	35 53	3 28.9
26	11½	36 24	3 22.8
26	9	36 44	3 17.2
26	12	36 49	3 26.0
26	11	36 56	3 24.9
26	9½	37 41	3 27.1
26	10½	38 31	3 29.8
26	10½	38 58	3 23.9
26	12½	39 30	3 15.9
26	9	40 10	3 8.1
26	11	40 35	3 9.4
26	10½	41 18	3 19.1
26	10	41 19	3 18.0
26	10½	23 41 39	—3 24.4

Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′
26	11	23 41 43	—3 15.2
26	9½	42 3	3 23.7
25	10	42 9	3 34.7
25	11	43 11	3 54.1
25	11½	43 33	3 35.7
26	11½	43 53	3 12.1
25	11	44 35	3 37.0
26	10	45 12	3 25.3
26	9½	45 26	3 24.7
27	11	45 30	4 49.8
26	10	45 32	3 12.2
25	11	45 34	3 34.5
25	11	45 47	3 40.3*
26	11	46 5	3 10.3
27	12	46 18	4 48.1
25	11½	46 30	3 37.5
25	11½	46 44	3 44.5
27	11	47 7	4 34.5†
26	9	47 19	3 14.0
26	12	47 21	3 17.7
26	11	47 35	3 18.4
26	11	47 45	3 18.2
27	9½	47 48	4 31.7:
26	11	49 8	3 28.1
25	11	49 37	3 34.9
26	11½	49 38	3 14.5
26	10½	49 40	3 11.1
25	11½	50 17	3 38.7
27	10	50 30	4 43.2
26	11½	50 31	3 29.9
25	11½	50 39	3 47.2
26	12½	50 49	3 28.9
25	10½	51 8	3 41.0*
25	10	51 9	3 38.0
27	10½	23 51 19	—4 33.6

* (4). † ? September, 1848.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
26	12	23 51 25	—3 24.0	27	11	23 56 49	—4 33.7
27	11	51 45	4 39.8	26	11½	56 55	3 27.1
26	10	51 50	3 26.4	25	12	57 2	3 31.4
26	12	51 51	3 27.2	27	11½	57 2	4 31.8
25	10½	51 58	3 38.8	26	11	57 9	3 28.1
25	10½	52 1	3 34.3	26	11½	57 21	3 26.2
25	10	52 35	3 46.9	25	10½	57 28	3 54.3
27	10	52 42	4 30.9	27	9	57 29	4 52.1
26	9	52 48	3 13.4	25	10	57 36	3 40.7
26	11½	52 57	3 30 0:	25	11	57 40	3 33.3
27	10½	53 14	4 46.8	26	11½	57 49	3 29.8
27	9	53 16	4 31.8	27	11½	58 29	4 43.1
25	12	53 26	3 36.7	26	11	58 30	3 22.1
26	10	53 39	3 24.0	24	11	58 32	4 17.4
25	12	53 42	3 38.7	25	10½	58 42	3 35.6
26	12	53 58	3 13.6	25	10½	58 46	3 33.8
27	11	53 58	4 35.4	26	11	58 50	3 18.8*
26	12	54 1	3 18.1	26	10½	58 53	3 27.8
27	11½	54 15	4 42.8	25	11½	59 3	—3 38.4
24	10	54 27	3 38.9	24	11	59 5	+4 21.2
27	9	55 8	4 39.5	24	11	59 26	4 19.5
26	12	55 12	3 25.8	24	9½	59 28	+4 30.4
26	12	55 21	3 11.8	25	9	59 31	—3 32.8
26	12½	55 24	3 22.2	25	10	59 32	3 49.5
27	9½	55 32	4 44.8	25	10	23 59 36	3 46.5
27	11	55 35	4 48.0	25	11	0 0 48	3 49.2
25	11½	55 37	3 46.6	25	11	0 55	3 48.7
27	11½	55 54	4 46.7	27	9	1 1	4 31.3
25	11½	56 2	3 47.5	25	11	1 7	3 47.3
25	11	56 11	3 47.7	25	12	1 12	3 46.7
25	10	56 13	3 52.1	25	12	1 25	3 45.5
26	12	56 14	3 23.7	26	11½	1 26	3 13.5
26	12	56 24	3 29.1	27	11½	1 29	4 47.9
27	11½	56 39	4 32.1	26	11	1 30	—3 16.9
25	12	23 56 49	—3 31.4	24	12	0 1 43	+4 21.2

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
24	12	0 1 47	+4 16.5	24	10½	0 7 8	+4 25.9
27	10½	1 51	—4 42.4	25	10	7 18	—3 38.2
27	10½	1 51	4 34.1	27	9½	7 34	4 47.8
25	11½	1 54	3 44.9	27	9½	7 35	—4 45.3
25	9½	2 1	—3 50.9	24	11	7 40	+4 23.7
24	11	2 21	+4 8.3	25	9½	7 47	—3 36.4
25	10½	2 37	—3 45.0	25	10½	7 52	—3 36.2
24	10	2 40	+4 29.2	24	10½	8 2	+4 14.0
25	10	2 41	—3 42.7	25	11	8 3	—3 42.4
25	11½	2 48	3 34.9	24	10	8 4	+4 20.8
27	11	3 2	4 42.1	24	10	8 24	4 23.5
27	11½	3 4	—4 37.6	24	11	8 40	+4 15.1
24	9	3 9	+4 15.2	25	11½	8 44	—3 36.0
24	9	3 21	+4 22.1	24	11	8 55	+4 16.9
27	11½	3 24	—4 44.2	25	11	9 29	—3 32.4
25	11½	3 34	3 44.0	25	9	9 52	—3 43.0†
27	10½	3 44	—4 44.3	24	11	9 59	+4 14.5
24	11½	4 24	+4 22.0	25	12	10 21	—3 47.7
24	10½	4 26	+4 13.2†	24	10½	10 45	+4 14.1
25	10½	4 36	—3 34.8	24	10½	10 47	4 11.6
25	10½	4 42	3 37.1	24	11	11 4	4 27.1
25	11	4 45	3 41.8	24	10	11 42	4 6.7
25	11	4 57	—3 35.5	24	10	11 52	4 25.0
24	10	5 4	+4 8.9	24	9½	12 37	4 29.8
27	10½	5 15	—4 31.5*	24	9	12 55	4 6.7
27	11	5 21	—4 39.5	24	9	13 17	4 6.8
24	11	5 28	+4 14.2	24	10	13 32	4 24.5
25	11	6 2	—3 47.6	24	10	13 35	4 27.5
25	10	6 15	—3 43.5	24	11	15 7	4 21.5
24	12	6 18	+4 6.4	24	11	15 17	4 28.4
27	10	6 26	—4 30.9	24	10½	16 48	4 12.7
25	10½	6 35	3 46.2	24	11½	17 20	4 14.5
27	11	6 35	—4 46.3	24	10½	17 22	4 12.9
24	11½	6 36	+4 6.5	24	10½	17 40	4 15.3
25	10½	0 6 53	—3 44.6	24	10	0 18 57	+4 21.5†

* N. *f.* of double. † (4).

Days Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
24	10½	0 19 35	+4 22.1	24	10	0 31 37	+4 26.9
24	10	19 43	4 13.3	24	11	31 43	4 17.0
24	11	20 40	4 14.9	26	12	31 49	2 49.2
24	12	20 50	4 15.7	24	11	32 18	4 22.6
24	10½	21 3	4 17.0	24	11	32 29	4 22.9
24	11	21 37	4 12.9	24	10½	32 53	4 22.6
24	12	22 36	4 16.2	24	10½	32 57	4 12.8
24	7½	22 47	4 9.2	26	11	33 1	2 38.6
24	10	23 19	4 27.0	26	11	34 20	2 41.9
24	9½	24 12	4 19.7	24	10	34 34	4 22.6
24	10½	24 43	4 20.5	24	11	34 47	4 22.8
24	11	25 16	4 14.7	24	11	34 54	4 14.7
24	11	25 18	4 20.3	26	10½	35 8	2 30.9
24	11	25 36	4 16.9	24	10½	35 27	4 10.1
24	11	26 18	4 20.9	24	9½	35 48	4 12.4
24	10	26 32	4 20.3	24	12	36 2	4 12.9
24	10	26 46	4 20.8	24	11	36 23	4 26.9
24	10	27 1	4 19.5	24	11	36 57	4 22.4
24	10½	27 11	4 21.4	24	11	37 17	4 23.1
26	10	27 13	2 34.8	24	11½	38 38	4 19.6
26	10	28 4	2 36.8	24	9	39 7	4 8.0
24	10½	28 13	4 24.2	24	8	40 18	4 17.1
26	10½	28 14	2 43.6	26	10½	40 33	2 46.1
26	12	28 34	2 39.1	26	10½	40 37	2 43.0
24	10½	28 47	4 19.9	26	11	40 39	2 41.2*
26	11	28 58	2 30.4	24	11	41 19	4 15.0:
24	11	29 26	4 22.1	26	10½	41 20	2 46.4
24	11½	29 28	4 23.2	24	10½	41 23	4 19.1
26	11	30 24	2 34.7	26	10	42 32	2 45.2
26	10	30 30	2 32.2	24	11	42 40	4 30.5
24	11½	30 44	4 16.3	26	10	42 52	2 43.8
24	10½	30 58	4 14.0	24	10	43 25	4 8.2
24	11	31 6	4 12.8	24	11	44 20	4 15.4
26	11	31 34	2 41.3	24	10	44 35	4 15.0
24	11	0 31 35	+4 17.2	26	11	0 44 42	+2 33.6

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
26	11	0 44 50	+2 41.5	24	9	0 52 33	+4 14.3
26	10	44 52	2 31.8	26	11	53 44	2 34.7
26	11	45 4	2 33.0	26	11	53 53	2 35.7
24	10½	45 15	4 20.1	26	10	54 15	2 28.1
24	10½	45 34	4 14.3*	24	11	54 27	4 16.6
24	10½	45 48	4 21.0	24	9	55 1	4 14.2
26	10½	45 53	2 45.1	24	10½	55 12	4 14.9
26	11	46 21	2 30.9	26	11	55 33	2 43.5
24	10	46 56	4 23.3	26	12½	55 38	2 42.9
24	10	46 59	4 10.2	24	8½	55 40	4 9.2
26	12	47 9	2 36.7	24	11	55 46	4 16.9
26	11½	47 19	2 32.9	24	10	55 54	4 20.6
26	10	47 35	2 33.8	26	12	55 57	2 43.6
24	11½	47 46	4 15.8	26	12½	56 2	2 43.9
24	11	48 5	4 16.0	24	11	56 15	4 20.6
26	10½	48 7	2 46.6	24	9½	56 49	4 10.8
26	11	48 8	2 31.3	26	10	56 49	2 49.7
24	10½	48 26	4 14.3	26	11	56 55	2 46.4
26	11	48 35	2 32.8	24	11	57 23	4 9.6
26	12	48 47	2 41.7	26	12	57 24	2 33.4
26	11½	49 9	2 38.6	24	11	57 33	4 16.0
24	10½	49 21	4 17.8	26	11½	57 34	2 33.0
24	10	49 47	4 14.6	26	11½	57 51	2 36.7
24	10½	49 47	4 21.5	26	11½	57 57	2 31.6
24	11	50 6	4 13.4	26	11½	57 59	2 36.5
24	11	50 16	4 15.4	26	11½	59 8	2 46.6
26	9½	50 28	2 36.6	24	10	59 23	4 15.1
26	9½	50 40	2 42.3	26	10	59 24	2 47.2
24	9	50 47	4 6.2	26	11	59 29	2 47.9
24	10½	50 48	4 8.6	24	10	0 59 37	4 14.0
26	10½	51 8	2 32.6	26	12	1 0 0	2 33.6
24	10½	51 35	4 15.4	26	12	0 12	2 33.7
26	12	51 44	2 35.0	26	12	0 32	2 34.5
26	12	51 47	2 32.5	24	10	0 41	4 23.3
24	11	0 51 50	+4 16.0	26	10½	1 0 44	+2 31.0

*(4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
26	10	1 0 47	+2 33.0	26	11½	1 17 42	+5 58.3
26	11½	1 6	2 32.1	26	12	18 5	6 8.4
24	11½	1 53	4 23.9	26	11½	18 16	6 5.2
26	9	1 53	2 48.3	26	11½	18 18	6 8.1
26	12	1 59	2 44.3	26	10	19 0	5 56.7
26	11	2 30	2 31.3	26	10	19 19	6 6.3
26	10	2 56	2 50.5	26	12	21 3	6 0.3*
24	11½	3 4	4 14.7	26	10½	21 7	5 57.0
24	10	3 10	4 27.7	26	12	21 43	5 57.8
26	10	3 36	2 42.9	26	11½	22 35	6 3.9
26	10	3 43	2 34.7	26	12	22 42	5 51.8
26	9½	3 47	2 40.9*	26	11	23 23	5 55.7
24	11	4 26	4 15.6	26	12	23 31	5 54.9
24	11	4 31	4 13.7	26	11½	23 47	5 49.1
24	10	4 55	4 14.5	26	10	24 17	5 49.3
24	11	5 6	4 7.6	26	11	24 23	5 48.7
24	12	6 19	4 13.0	26	10	25 18	5 53.8
24	11½	7 4	4 13.3	26	11	25 29	5 52.4
24	11½	7 18	4 8.6	26	11½	26 21	6 5.3
24	12	8 6	4 9.6	26	10	26 44	6 6.7
24	10	8 18	4 21.3	26	9	26 54	5 59.5
24	12	8 59	4 22.0	26	11	27 20	5 53.5
24	10	9 14	4 23.4	27	10	28 29	13 51.1
24	11	9 54	4 20.8	26	8	28 52	5 57.0†
24	11	10 24	4 21.4	26	10	29 10	6 8.8
24	11	10 46	4 22.5	27	11	29 15	13 33.4
24	8	11 18	4 14.7	26	11½	29 18	5 56.6
24	11	12 2	4 20.4	27	11	29 21	13 38.2
24	11	12 14	4 28.0	27	11½	29 23	13 35.3
26	9	12 54	5 50.1	26	11½	29 24	6 1.0*
24	10½	13 20	4 21.8	27	9½	29 28	13 40.8*
26	11	13 35	6 6.2	27	10	30 19	13 47.1
26	11	13 51	6 2.2	27	10½	30 37	13 50.8
26	10½	14 19	5 59.9	26	11½	30 39	6 10.2
26	12	1 16 50	+5 53.7	26	11	1 31 2	+6 5.2

* (4). † M. C.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
27	11	1 31 8	+13 33.1	27	10½	1 45 13	+13 48.9
26	11½	31 14	6 10.0	27	11½	45 52	13 46.2
26	11½	31 50	5 56.0	27	11½	46 3	13 43.7
27	8½	32 11	13 42.7	27	9	47 1	13 36.5
27	9	32 20	13 44.7	27	11	47 26	13 44.3
26	12	32 49	5 55.0	27	9½	48 8	13 36.2
26	12	33 1	5 54.8	27	10½	48 31	13 37.1
26	10½	33 8	6 9.5	27	11	48 36	13 38.2
27	12	33 12	13 30.6	26	12	49 15	7 31.5
27	12	33 22	13 32.1	27	9½	49 18	13 48.0
27	11	33 36	13 32.9	26	10½	49 27	7 42.1
27	9	33 46	13 37.8	26	12	49 43	7 49.1
27	11½	34 27	13 44.3	27	11	49 55	13 30.5
26	11	34 31	5 59.3	27	9	50 43	13 36.4
27	11½	34 41	13 41.5	27	11½	50 54	13 47.2
26	10	34 53	5 51.4	26	11	50 56	7 37.9
26	11½	34 59	5 53.2	26	11	50 57	7 34.9
27	8	35 47	13 40.6	26	11	51 12	7 45.2
27	12	36 3	13 41.2	27	11	51 48	13 32.8
27	11½	36 17	13 45.8	26	10½	52 3	7 32.4
27	10	36 47	13 43.5	26	11	52 19	7 42.4
27	11½	37 51	13 35.7	27	10½	52 24	13 34.8
27	12	38 26	13 33.6	27	9	52 50	13 36.3
27	12	38 31	13 36.4	26	11	53 11	7 31.9
27	11	38 42	13 33.8	26	10½	53 52	7 37.1
27	12	39 29	13 46.8	26	9½	53 57	7 49.1
27	12	39 32	13 47.7	26	12	54 12	7 39.2
27	9½	39 46	13 45.9*	27	12½	54 27	13 32.3
27	11	40 51	13 37.4	26	10	54 32	7 47.3
27	10½	40 55	13 30.2	27	11	55 29	13 46.9
27	10½	41 40	13 33.0	26	11	55 42	7 41.6
27	9½	41 56	13 47.4	26	11	56 6	7 36.7
27	10½	42 17	13 33.7	26	11½	56 30	7 36.7
27	12	43 30	13 33.1	26	11	56 33	7 34.4
27	10	1 43 44	+13 35.5	26	11	1 57 3	+7 36.3

*f. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
27	12	1 57 20	+13 34.5	27	11	2 16 46	+13 33.6
27	8	57 35	13 50.7	27	11	17 5	13 46.1
27	11	58 26	13 41.6	27	10½	18 39	13 47.6
27	10½	58 31	13 32.3	27	11	18 42	13 43.7
27	12	58 38	13 31.9	27	10	19 24	13 46.4
26	11	59 0	7 43.4	27	10	19 58	13 48.3
26	11	59 20	7 49.3	27	10½	20 34	13 43.6
27	9	1 59 39	13 35.2	27	9	20 51	13 43.9
26	9½	2 0 17	7 51.1	27	11	21 2	13 33.1
26	11	0 22	7 34.7	27	10	21 13	13 35.3
27	9	0 31	13 41.8	27	11	21 24	13 34.7
27	9½	0 55	13 43.5	27	11	22 45	13 34.4
26	12	1 33	7 33.7	27	11	23 2	13 38.8*
26	11	1 49	7 36.0	27	11	23 26	13 38.7*
26	11	1 49	7 33.6	27	11½	24 59	13 35.9
27	9½	1 55	13 38.2	27	11	25 5	13 32.8
26	11½	3 10	7 47.1	27	9½	25 30	13 45.0
27	11	4 32	13 42.4	27	10	26 34	13 41.6
26	12	4 40	7 48.6	27	9	26 35	13 48.4
26	12	4 51	7 48.7	27	11	26 38	13 41.1
27	11	7 46	13 34.4	27	10	26 46	13 43.1
27	11	7 58	13 33.3	27	11½	27 40	13 30.3
27	11	8 19	13 33.3	27	10½	28 33	13 43.1
27	10	8 28	13 42.2	27	10	28 38	13 34.5
27	11	10 4	13 37.8	27	11	29 10	13 43.3
27	11	10 15	13 46.9	27	11	29 12	13 43.7
27	12	11 25	13 48.5	27	11	29 58	13 41.9
27	11	11 30	13 35.1	27	10	30 45	13 42.5
27	10	12 21	13 31.8	27	11½	31 1	13 42.2
27	10½	13 12	13 29.3	27	9½	32 14	13 35.1
27	11½	13 26	13 31.8	27	10	34 0	13 44.0
27	11	14 33	13 46.9	27	11	34 25	13 42.2
27	12	14 50	13 40.9	27	11	35 33	13 34.2
27	10	15 25	13 28.4	27	10½	36 17	13 46.3
27	8½	2 16 36	+13 32.8	27	11	2 36 59	+13 32.2

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	°			h. m. s.	° ′
27	10	2 37 29	+13 36.9	27	9	2 48 29	+13 37.0
27	11	38 8	13 44.8	27	12	48 43	13 38.5
27	11	38 32	13 44.5	27	11	48 58	13 34.5
27	11	38 38	13 43.1	27	10	49 14	13 37.0
27	9½	38 45	13 35.2	27	9½	49 18	13 43.7†
27	9	38 56	13 44.1	27	10	50 36	13 31.5
27	10	39 6	13 32.9	27	9½	51 35	13 42.8
27	9	40 12	13 49.3	27	11½	52 25	13 48.2
27	10	40 18	13 41.4	27	11	52 31	13 44.2
27	10½	40 53	13 43.2	27	11	53 30	13 40.9*
27	9½	40 56	13 46.2	27	12	53 38	13 31.7
27	10	41 5	13 46.1	27	10½	54 51	13 33.7
27	11	42 4	13 43.1	27	9	55 4	13 44.1
27	10½	42 22	13 45.1	27	11½	55 5	13 38.6
27	11	42 35	13 40.9*	27	10	55 33	13 40.8*
27	11	42 41	13 43.4	27	11	57 4	13 46.8
27	11	42 53	13 38.7	27	8½	57 9	13 41.4
27	11	43 6	13 39.0	27	8½	57 32	13 41.0*
27	8	43 32	13 36.8	27	11	59 8	13 44.4
27	9	44 30	13 28.7	27	10½	59 20	13 46.3
27	10½	44 45	13 31.7	27	10½	2 59 36	13 32.2
27	11	45 47	13 44.1	27	10	3 0 8	13 33.0
27	10½	45 53	13 47.0	27	9½	0 36	13 42.0
27	10½	45 56	13 43.1	27	11	1 48	13 49.5
27	9	46 59	13 48.0	27	11	1 54	13 49.0
27	10½	47 0	13 46.3	27	10	2 0	13 38.6
27	11	2 47 4	+13 38.9	27	9	3 2 29	+13 46.4

* (4).

† *p.* of double.

APPROXIMATE MEAN PLACES, FOR JANUARY 1, 1850,

OF

912 STARS NEAR THE ECLIPTIC,

OBSERVED IN DECEMBER, 1851, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
11	9	23 45 3	—1 50.9	22	12	0 2 42	+4 33.6
11	10½	46 49	2 3.0	11	11	2 48	—1 51.0
11	11	50 53	1 49.6	22	11½	2 51	+4 36.0
11	11½	52 3	2 3.5	22	11	3 38	4 45.3
11	12½	52 28	2 3.8	22	11½	4 9	4 33.9
11	12	53 10	2 8.1	22	12	4 18	4 37.3
11	12	53 22	—2 3.1	22	11	4 25	4 31.7†
22	11½	56 42	+4 42.0	22	9	5 8	+4 47.6
22	10	56 44	4 44.1	11	12	5 11	—2 6.4
22	10½	56 54	+4 37.1	22	11	5 22	+4 44.9
11	11	57 0	—1 55.9	22	10	5 23	4 47.7
11	12	57 16	—1 51.6	22	11	5 29	+4 46.4
22	10½	57 26	+4 42.9	11	12	5 38	—2 7.7
11	11	57 56	—2 5.9	22	11	6 1	+4 43.5‡
22	10	58 44	+4 38.1	11	10½	6 3	—1 49.3
22	12	58 50	+4 38.3	11	10	6 40	—2 1.3
11	12	58 53	—2 2.7*	22	11	7 3	+4 43.3
22	10	59 7	+4 44.1	22	12	7 11	+4 46.9
22	10	59 20	4 43.5	11	11	7 35	—1 50.6
22	9½	23 59 35	4 35.7	22	11	8 2	+4 39.5
22	10½	0 0 31	4 37.8	11	11	8 3	—1 54.7
22	9½	0 48	4 47.6	11	11	8 4	1 52.0
22	12	0 56	+4 43.8	11	10½	8 6	—1 48.0
11	11	1 7	—1 55.8	22	10½	8 12	+4 47.3§
22	10½	1 7	+4 38.0	11	11	8 19	—1 55.0
11	11	1 22	—2 2.8	11	10	9 12	1 49.7
11	12	2 17	—1 49.6	11	10	9 45	1 54.7
22	12	2 22	+4 38.3	11	10	10 4	1 52.7
11	12½	2 26	—1 50.1	11	10½	10 51	—2 4.6
22	12	0 2 27	+4 34.9	22	11½	0 11 3	+4 44.6

*N. *p.* of double. † An 11th Mag. *f.* ‡ L. of double. § *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
22	11½	0 11 16	+4 45.7	22	9	0 19 32	+4 48.6
22	10	11 19	4 48.2	11	12	19 41	—2 4.8
22	11½	11 35	+4 38.9	11	12	19 42	—2 6.0
11	11	11 52	—2 5.0	22	11½	20 18	+4 35.3
11	10½	11 52	—2 5.7	22	11½	20 49	4 46.9
22	11	12 30	+4 45.7	22	10½	21 14	4 46.4
22	10	12 31	+4 39.3	22	10	21 22	+4 30.0
11	12	12 33	—1 50.2	11	11	21 45	—2 0.9
11	11½	12 51	2 4.1	22	9½	22 3	+4 34.4
11	11	13 6	—2 4.3	22	11½	22 18	+4 35.2
22	11	13 9	+4 43.1	11	10	22 21	—2 7.3
22	11½	14 24	4 47.9	22	9	22 32	+4 32.1
22	12	14 31	4 43.1	22	12	23 22	4 45.6
22	12	14 47	4 36.9	22	11½	23 24	+4 46.8
22	11	14 57	4 32.1	11	12	23 28	—1 56.0
22	10	15 16	+4 41.9*	22	12	23 38	+4 48.9
11	10½	15 44	—2 4.8	22	12	23 41	+4 46.7
22	10	15 51	+4 41.7	11	12	24 0	—2 2.2
22	11½	16 12	4 37.9	11	10	24 20	—2 3.8‡
22	11½	16 27	+4 33.1	22	11½	24 32	+4 35.9
11	11	16 49	—2 2.3	22	11½	24 40	4 35.9
11	10	17 4	1 50.3	22	10	24 51	4 32.0
11	12	17 17	1 59.8	22	10½	24 52	+4 35.9
11	12	17 18	—1 59.6†	11	12	25 2	—2 6.4
22	11½	17 28	+4 35.2	22	9½	25 44	+4 38.4
22	10½	17 43	4 48.5:	11	10	25 52	—2 4.0
22	11	17 57	+4 45.0:	22	12	25 54	+4 39.3
11	11½	18 0	—2 1.5	22	12	26 40	4 46.7
22	10½	18 32	+4 37.1	22	10½	27 36	4 46.1
11	10½	18 42	—2 1.1	22	10½	27 38	+4 48.7
22	9½	18 45	+4 37.7	11	9½	27 49	—1 54.7
11	10½	18 59	—1 58.3	22	10	28 24	+4 40.1*
22	11½	19 22	+4 44.0	22	11½	28 24	+4 32.9
11	12	19 31	—2 2.6	11	11	28 45	—1 46.7
11	12	0 19 32	—2 0.2	22	12	0 29 2	+4 33.1:

* (4). † Not same as preceding. ‡ N. *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
11	12	0 29 21	−2 2.4	22	12	0 43 51	+4 33.4
22	12½	30 7	+4 32.9	22	12	43 59	4 45.9
22	12	30 29	4 36.4	22	10½	44 13	4 33.6
22	10	30 51	4 37.3	22	12	44 49	4 47.6
22	10½	31 3	4 31.7	22	10	44 59	4 45.8
22	11	31 15	+4 43.1	22	10	45 46	4 42.6
11	11	31 40	−1 52.9	22	10½	46 12	4 48.1
22	12½	32 36	+4 43.3	22	12½	46 57	4 45.2
11	10	33 13	−2 3.6	22	12	47 12	4 45.0
22	11½	33 14	+4 42.2	22	12	47 19	4 37.7
11	11½	33 16	−2 4.6	22	11	47 37	4 44.2
22	11	33 28	+4 36.0	22	12½	48 56	4 43.5†
22	8	33 57	4 45.0	22	10½	49 4	4 32.4
22	11½	33 58	+4 48.2	22	10	49 22	4 49.1
11	11	34 11	−2 4.2	22	12	50 7	4 44.3
11	11½	34 26	2 4.7	22	10	50 20	4 34.4
11	9½	34 28	−2 1.7	22	12	50 24	4 38.0
22	9	34 31	+4 52.2	22	10	51 27	4 32.3
22	7	34 48	4 51.3	22	10½	52 38	4 34.6
22	11	34 53	4 48.8	22	10½	52 43	4 32.2
22	10	35 0	4 39.5	22	10	52 54	4 42.9
22	12	35 10	4 39.3	22	12	53 51	4 43.5
22	9½	36 4	4 39.3*	22	11	54 39	4 37.7
22	9½	36 42	4 44.2	22	11	54 47	4 37.6
22	10	37 45	4 48.7	22	11	54 48	4 35.1
22	10½	38 19	4 45.6	22	10½	55 2	4 33.7
22	10½	39 29	4 36.3	22	10	56 54	4 48.9
22	10½	39 47	4 34.3	22	10	57 39	4 47.1
22	10	39 56	4 34.9	22	10	58 9	4 40.0
22	11	40 52	4 42.2	22	10½	0 58 38	4 39.3
22	12	40 56	4 42.2	22	10½	1 0 46	4 49.6
22	10	42 28	4 42.4	22	10½	0 47	4 42.2
22	11	42 36	4 36.3	22	10	0 47	4 31.9
22	12	42 39	4 35.2	22	10	1 50	4 39.9*
22	10½	0 43 47	+4 43.5	22	10½	1 2 24	+4 47.1

* (4).

† *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
22	10½	1 2 29	+4 48.0	22	8	1 22 46	+4 35.8
22	10½	4 35	4 45.4	22	11	22 59	4 33.9
22	10½	4 38	4 45.1	22	9½	23 58	4 48.7
22	11	5 6	4 38.1	22	11½	24 6	4 47.2
22	10	6 27	4 34.6	22	11½	24 57	4 38.7†
22	10	6 28	4 38.6	22	9	25 13	4 36.5
22	10½	6 39	4 29.5	22	11½	25 30	4 34.6
22	10	7 23	4 42.1:	22	11	26 51	4 35.9
22	10½	7 43	4 33.9	22	12½	26 57	4 34.3
22	10½	8 6	4 41.9*	22	11	27 23	4 36.0
22	11	10 41	4 38.7	22	9½	27 59	4 31.4
22	10	10 51	4 39.0	22	9½	28 25	4 42.1*
22	11	12 11	4 42.9	22	10	28 46	4 43.2
22	11½	12 43	4 37.5	22	12	28 48	4 48.9
22	11½	13 21	4 36.5	22	10½	31 5	4 49.1
22	9	13 24	4 50.1	22	11	31 19	4 48.9
22	10½	13 48	4 32.6	22	11	31 36	4 43.8
22	10	13 51	4 46.8	22	10	32 2	4 44.7
22	11½	14 33	4 34.8	22	10	32 3	4 46.8
22	10½	14 54	4 37.5	22	11	32 21	4 47.6
22	10½	14 58	4 49.9	22	10½	32 48	4 43.1
22	11½	14 59	4 46.0	22	9½	1 32 51	4 49.4
22	12	15 52	4 32.7	12	10	2 3 7	15 8.3
22	12	16 25	4 33.6	12	10½	4 8	14 56.6
22	10½	16 37	4 46.0	12	9	4 26	15 5.4
22	11	17 43	4 43.8	12	11½	5 0	15 5.1
22	11	17 53	4 37.1	12	11	5 21	15 7.9
22	11	18 6	4 44.4	12	11	5 34	15 2.6*
22	10½	19 26	4 36.1	12	8½	5 58	15 8.9
22	10½	20 14	4 32.2	12	10½	6 28	14 57.8
22	12	21 5	4 44.7	12	12	6 57	15 9.1
22	9½	21 10	4 44.8	12	11½	7 6	15 9.6
22	9½	21 11	4 47.6	12	10	7 8	15 1.8*
22	10	22 4	4 50.2	12	12	7 53	15 4.8
22	11	1 22 22	+4 42.3	12	11	2 8 46	+14 57.3

* (4).

† An 11½ Mag. *f*.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
12	11	2 9 13	+14 54.8	12	10½	2 27 56	+14 53.6
12	12½	9 19	15 1.8	22	11	28 50	19 47.4
12	10	10 13	15 10.6	12	12	28 56	15 9.2
12	11	10 53	14 51.4	22	10	28 59	19 36.8
12	11	11 5	15 4.0	22	9½	29 13	19 49.8
12	11	11 23	14 54.3	12	12	29 29	15 10.4
12	12	12 20	14 53.1	12	11	29 41	14 55.3
12	11	12 25	15 7.2	22	10	30 0	19 35.9
12	12	12 45	14 52.7	22	9½	30 22	19 50.2
12	10½	12 56	14 53.0	12	11	30 27	14 56.5
12	11½	13 58	15 2.8	22	10½	30 27	19 44.6
12	11½	14 0	15 7.0	12	11½	30 36	14 57.7
12	10	14 0	15 10.6	12	10½	30 39	14 56.6
12	10½	14 9	15 2.8	22	12	32 3	19 50.9
12	11	16 37	15 0.2	12	10	32 7	14 58.9
12	9½	18 11	14 49.2	22	12½	32 14	19 46.7
12	11½	18 18	15 4.4	12	9½	32 16	14 57.3
12	10½	18 55	15 4.8	12	11½	32 34	15 8.8
12	11	20 0	14 56.9	22	11	33 6	19 43.1*
12	11	20 4	14 52.7	12	10	33 10	15 7.8
12	10	20 46	15 10.0	22	11	33 45	19 43.4
12	11	21 13	14 56.6	12	11½	34 56	14 57.1
12	11½	21 54	15 10.3	22	10½	34 58	19 40.2
12	10½	22 11	15 6.1	12	11	35 0	15 8.2
12	12	22 20	15 8.9	12	9½	35 12	14 58.0
12	11	23 23	15 10.0	12	9	35 44	14 56.3
12	11	23 33	15 3.7	12	9½	36 27	14 57.0
12	11	24 9	14 54.5	22	12	36 35	19 37.2
12	12	24 38	15 5.8	22	12	36 41	19 36.0
12	11	25 10	14 57.6	12	10½	36 46	14 54.2
12	9½	25 19	14 55.2	12	11	37 2	14 55.1
12	12	27 2	14 59.7	12	9½	37 22	15 6.3
22	10	27 33	19 29.6	22	11½	37 33	19 32.7
12	9½	27 35	15 2.7	12	12	38 1	15 4.4
12	11½	2 27 53	+14 58.1	22	10	2 39 5	+19 49.6

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
12	11	2 39 6	+15 3.5	12	12	2 47 17	+15 2.4
22	11	39 8	19 50.7	22	12	47 42	19 46.4
12	11	39 20	15 5.1*	12	12	47 50	15 7.6
12	11	40 5	15 11.3	22	10½	48 33	19 50.2
22	12	40 11	19 43.6	12	12½	48 49	14 54.5
22	11	40 19	19 44.0	22	10½	49 1	19 47.3
22	10	40 25	19 33.7	12	12½	49 16	14 58.0
22	11	40 30	19 47.1	22	12½	49 27	19 48.4
22	11	40 44	19 36.1†	22	10½	49 33	19 49.4
12	11	40 47	14 59.2	12	11½	49 36	14 51.8
12	11	40 54	15 3.8	22	10½	49 58	19 37.2
12	10½	40 56	15 5.6:	22	10	50 29	19 37.0
12	11½	41 10	15 5.5	22	12	50 34	19 36.5
12	10½	41 12	15 6.1	22	9½	51 11	19 36.9
22	10½	41 24	19 49.9	22	12	51 48	19 37.0
12	11½	41 35	15 3.2	22	12	52 0	19 39.9
22	11	41 37	19 51.2	12	12	52 6	15 4.4
22	10½	41 41	19 48.5	12	12	52 10	15 4.7
22	11	41 51	19 43.4	22	12½	52 22	19 38.2
12	9½	42 16	15 6.2	12	10½	52 27	15 9.2
22	10½	42 32	19 54.1	22	11	52 30	19 39.2
12	11	43 13	15 6.6	22	12	53 38	19 36.0
22	12	43 26	19 47.6	12	11½	53 44	15 2.3
12	11½	43 36	15 5.8	12	10½	53 53	15 10.7
12	11½	43 50	14 58.5	22	11½	54 0	19 37.2
12	10	43 56	15 12.1	12	12	54 2	14 55.2
12	11	44 0	15 4.9	12	11	56 15	15 1.8
22	12	44 12	19 39.1	12	11½	56 33	15 6.7
22	12	44 34	19 40.4	22	12½	56 35	19 39.4
22	12	44 37	19 39.0	12	12½	58 0	15 2.2
12	11½	44 58	14 53.3	12	12	58 35	15 3.6
22	9½	45 25	19 37.1	12	12	58 41	14 59.1
12	10½	46 10	14 52.4	12	12	58 43	15 6.4
12	10½	46 22	14 51.3	12	10	59 16	14 55.1
12	10	2 46 52	+14 59.2	12	10	2 59 16	+15 1.7

* S. of double.

† L. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
22	12	2 59 19	+19 37.1	22	11½	3 10 2	+19 40.6:
22	10	2 59 55	19 38.2	12	11½	10 15	14 53.5†
22	10½	3 0 29	19 45.7	22	11	10 24	19 40.1
12	12	0 58	14 57.2	22	10	10 46	19 45.3
12	12	1 5	14 56.4	12	12½	11 15	14 57.3
12	12	1 16	15 2.1	12	12	11 17	15 5.3
12	9	1 31	15 6.2	22	11½	12 36	19 34.2
12	11½	2 38	14 54.8	12	11	12 44	15 10.7
22	9	2 51	19 39.3	22	11	12 49	19 46.2
12	9½	3 8	14 52.2	12	10½	12 52	15 3.3
12	11	3 38	15 3.3	22	10½	13 22	19 38.8
12	12	3 59	15 2.3	22	10	13 59	19 35.8
22	9	4 11	19 50.0	12	11½	14 11	14 54.4
22	11½	4 23	19 34.2	22	10	14 30	19 39.4
22	12	4 49	19 36.5	12	11	14 53	14 58.2
12	11½	5 12	15 3.3*	22	10½	14 54	19 36.4
12	11	5 19	14 56.2	22	10½	15 11	19 36.7
22	12	5 31	19 35.8	12	10	15 14	15 7.7
22	12	5 50	19 46.4	12	12	15 17	15 3.3
22	12	5 50	19 49.9	12	10½	16 1	15 5.0
22	9	6 12	19 46.8	22	10	16 4	19 40.3
12	11	6 31	14 53.0	12	11	16 16	14 53.7
22	10½	7 19	19 30.5	22	11	16 36	19 43.9‡
12	12	7 22	14 58.1	22	9	16 43	19 48.3
22	11½	7 47	19 33.0	12	10	17 13	14 58.1
12	10	8 12	15 4.9	12	12	17 14	14 55.5
22	11½	8 15	19 33.1	12	9½	17 38	15 0.1‡
22	11½	8 16	19 33.4	22	12	18 25	19 43.0
12	12	8 42	15 4.3	12	11	18 30	15 4.7
12	12	8 43	15 4.4	12	10½	18 41	15 1.8‡
12	10	8 52	14 57.0	22	12	18 44	19 41.2
12	11½	9 2	14 54.4	12	10	18 47	14 55.0
22	12	9 11	19 33.3	22	11	19 8	19 49.1
22	12	9 22	19 38.1	22	10	19 53	19 33.3
12	10½	3 9 59	+14 52.5	12	12	3 19 59	+14 53.1

* Double. † *p.* of double. ‡ (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
22	9	3 20 2	+19 38.5	22	11½	3 36 28	+17 14.7
22	11½	20 6	19 35.0	22	10	37 7	17 18.9*
12	10½	20 44	14 59.9*	22	11½	37 8	17 15.8
22	11	20 44	19 32.6	22	12	37 17	17 12.2
12	11½	20 51	14 53.1	22	9	37 52	17 26.8
12	12½	20 57	14 55.9	22	11½	38 45	17 28.2
22	11½	21 19	19 32.9	22	12½	38 50	17 29.1
22	12	21 21	19 35.6	22	12½	39 30	17 25.3
22	9	21 45	19 38.2	22	11½	39 37	17 24.4
12	11½	22 6	14 56.7	22	10½	39 57	17 22.6
12	11	22 7	14 52.5	22	11½	40 15	17 16.2
12	10½	22 19	14 54.8	22	9	40 48	17 21.0*
12	11	22 53	15 11.4	22	10	40 48	17 16.5
12	11½	23 44	15 6.8	22	10½	41 20	17 27.7
12	12½	24 48	14 52.9	22	12	42 3	17 12.5
12	9½	24 55	15 1.6*	22	11½	42 19	17 26.0
12	10½	25 15	14 53.6	22	10½	42 54	17 23.3
12	11	25 57	15 2.0	22	11	43 19	17 24.9†
12	10½	25 58	15 1.1	22	12	44 30	17 27.4:
12	11½	26 48	14 56.0	22	12	44 36	17 26.7
12	10	27 25	14 56.2	22	12½	44 51	17 25.6
12	11	27 39	15 6.8	22	10½	44 53	17 25.9
12	10	27 49	14 52.8	22	12	45 10	17 27.1
12	10	28 25	14 49.6	22	11	45 58	17 22.9
12	10	28 47	15 8.1	22	10½	46 15	17 27.7
12	10½	29 5	15 4.9	22	11	46 46	17 22.0:
12	10½	29 14	15 5.3	22	11	46 49	17 28.1
12	12	30 20	14 54.3	22	10½	47 37	17 30.6
12	12	30 20	14 52.8	22	11	47 45	17 18.1
12	11½	31 2	15 10.2	22	10½	48 8	17 15.3
12	11	31 14	15 0.4	22	11½	48 52	17 26.5
12	10	32 13	15 2.9	22	12	49 2	17 22.0
12	12	33 5	15 1.1	22	11	49 42	17 27.9
22	11	35 38	17 27.8	22	12	50 16	17 25.2
22	11	3 35 42	+17 26.7	22	12	3 50 32	+17 26.2

* (4). † An 11th S. *p*.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
22	9	3 51 15	+17 16.1	22	11	4 11 19	+17 24.5
22	9½	51 57	17 22.7	22	11	11 20	17 23.4
22	9½	51 59	17 18.7*	22	12	11 21	17 29.6
22	9½	52 8	17 28.1	22	12	11 35	17 23.6
22	12	53 8	17 29.2	22	11	12 17	17 16.1:
22	10½	53 25	17 29.6	22	11	12 57	17 17.8
22	10	53 42	17 31.8	12	11	13 5	20 17.3
22	10	54 16	17 30.6	22	11	13 9	17 26.9
22	11	54 27	17 25.6	12	11½	14 5	20 28.6
22	11½	54 53	17 27.5	22	11	14 32	17 17.8
22	11	55 15	17 21.6*	22	11½	14 39	17 18.9
22	12½	55 28	17 28.1	22	11	15 14	17 21.7
22	12	55 31	17 22.9	12	12	15 15	20 13.3
22	12	55 57	17 22.1	12	12	15 19	20 12.8
22	10½	57 37	17 24.4	22	10½	15 26	17 12.0
22	10½	57 42	17 26.8	12	11	15 35	20 15.4
22	11	58 13	17 23.2	22	11½	15 39	17 11.9
22	10½	3 59 17	17 26.1	12	11½	16 1	20 13.9
22	11	4 0 2	17 9.2	22	11½	16 1	17 22.8
22	12	0 29	17 12.3	22	11½	16 1	17 22.0
22	12	0 57	17 15.3	22	12	16 6	17 30.6
22	9	1 25	17 25.3	22	11½	17 49	17 24.0
22	11	1 34	17 13.5	12	12	17 54	20 28.0
22	12	3 32	17 15.7	22	11½	18 7	17 25.1
22	11	4 5	17 21.7	12	12	18 22	20 25.0
22	11½	4 26	17 18.4	22	10½	18 22	17 26.1
22	12	4 48	17 24.6	22	11½	18 24	17 23.7
22	11½	4 59	17 20.3	22	10	18 24	17 28.4
22	12½	5 53	17 13.8	12	12	18 29	20 25.1
22	11½	6 33	17 16.6	12	11½	19 7	20 22.3
22	11	7 12	17 22.0	22	12½	19 56	17 10.7
22	10	7 24	17 17.9	22	11½	20 0	17 20.9
22	10½	7 34	17 19.3*	22	12½	20 0	17 11.1
22	11	7 34	17 24.8	22	11½	20 2	17 21.3
22	12	4 11 16	+17 27.3	12	10½	4 20 17	+20 16.3

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
12	10½	4 20 18	+20 21.8*	22	12½	4 31 51	+17 11.6
12	10	21 37	20 12.9	18	10	32 14	25 36.9
22	9½	21 45	17 27.3	12	10	32 33	20 18.5*
22	10	22 6	17 19.4	12	11	32 35	20 29.6
12	12½	22 11	20 27.6	18	10½	33 11	25 33.6†
12	11½	22 22	20 28.3	18	12½	33 41	25 33.1
22	9	22 37	17 13.6	22	12	33 41	17 17.7
22	12	22 41	17 17.4	22	12	33 58	17 15.8
12	10	22 49	20 27.4	22	12	33 58	17 14.4
12	10½	22 51	20 11.3	12	10½	33 59	20 29.3
22	9½	22 53	17 25.4	12	12	34 0	20 14.5
22	9½	22 57	17 23.0	12	10½	34 43	20 22.0
12	10½	23 11	20 17.2	18	12	34 43	25 43.8
12	12	23 23	20 13.4	18	11	35 13	25 46.6
22	11	23 31	17 23.7	18	9	35 28	25 39.0*
22	12	23 56	17 23.5	12	12	35 29	20 18.1
22	10	24 21	17 24.3	12	12	35 35	20 15.2
22	11	24 35	17 22.8	18	11½	35 53	25 47.3
12	11	24 38	20 13.9	18	11	36 2	25 45.7
12	11	24 56	20 15.4	12	11	36 19	20 24.7
22	11	25 1	17 25.4	18	11	36 21	25 45.2
12	10	25 27	20 11.0	12	12	37 27	20 25.4
22	12	25 37	17 22.5	18	10½	37 35	25 45.6
22	12	25 37	17 24.9	18	11½	38 0	25 35.8
12	11	26 52	20 21.9	12	11	38 3	20 11.3
12	12	27 4	20 14.0	12	10	38 21	20 16.3
12	11	27 7	20 25.5	12	11	38 47	20 29.9
22	12	27 24	17 9.2	12	12	38 54	20 23.5
12	12	27 34	20 24.7	12	11	39 40	20 25.8
12	9½	28 3	20 29.8	12	10½	40 3	20 29.8
12	11½	28 4	20 27.1	18	10½	40 25	25 45.7
22	12½	28 13	17 25.9	12	10½	40 56	20 16.7
22	12½	28 19	17 25.9	12	10½	41 8	20 28.7‡
22	11½	29 13	17 24.7	18	10	41 13	25 46.9
12	11	4 29 27	+20 12.8	18	10	4 41 26	+25 43.2

* (4). † A. 10½ N. *p*. ‡ Double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
12	10	4 42 7	+20 14.4	10	11	4 52 51	+20 54.4
12	11	42 12	20 11.4	18	12	53 9	25 43.4
12	10½	43 0	20 15.9	12	11	53 14	20 23.7
12	12	43 7	20 18.0	12	10½	53 16	20 27.1
12	10	43 29	20 24.8	18	10	53 57	25 40.5
18	11	43 39	25 30.9	12	11½	54 14	20 13.8
12	11½	44 28	20 19.3	18	12	54 31	25 46.4
12	11	44 33	20 15.8	12	11½	54 57	20 25.2
12	10	44 41	20 24.9	12	12	55 11	20 27.0
18	11	44 45	25 49.4	12	11	55 24	20 28.4
18	10½	44 50	25 41.7*	12	11½	55 33	20 22.8
12	12	44 51	20 25.6	12	11½	56 45	20 26.8
18	11	45 8	25 33.9	18	11	57 3	25 35.3
12	11	46 0	20 13.2	10	11	57 35	20 54.7
12	11	46 29	20 19.2	12	9½	57 49	20 30.0
18	11	46 49	25 52.5	10	10½	57 54	20 55.8
18	11	47 9	25 47.2	12	10	57 56	20 15.0
12	11	47 21	20 18.4	12	10	58 23	20 26.1
12		47 33	20 30.9	10	11½	58 43	21 7.8
18	9½	47 45	25 32.2	10	11	59 12	20 54.7
18	9½	47 49	25 35.0	12	11	4 59 52	20 32.8
12	10	47 51	20 24.6	12	11	5 0 2	20 27.3
18	10	48 34	25 28.9	10	11½	0 20	21 6.5
12	11½	49 16	20 24.6	10	11	0 21	20 59.8
18	11	49 17	25 31.6	10	12	0 37	21 4.5
18	11½	49 22	25 46.8	12	10	0 44	20 23 3
12	12	49 30	20 26.9	10	10	0 45	20 52.6
12	12	49 45	20 23.1	10	9½	1 56	21 9.2
18	12	50 30	25 42.3	10	11½	2 12	21 8.6
12	12	50 31	20 15.3	12	10½	3 20	20 22.6
18	10½	50 42	25 41.8*	12	12	3 22	20 25.8
10	11	50 53	20 52.0	12	11	3 26	20 15.3
12	12	50 52	20 14.8†	10		3 53	21 0.7
12	11	52 22	20 21.5	10	11	4 9	20 55.7
18	9	4 52 23	+25 44.4	10	10	5 4 15	+20 59.5*

* (4). † *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
12	11	5 4 36	+20 27.5	10	11	5 21 11	+21 10.2
12	11	4 39	20 26.8	10	10½	22 10	21 11.9
12	12	4 51	20 26.3	10	10½	22 11	21 8.6
10	11	5 51	20 55.1	10	11	22 19	21 11.9
12	10	6 16	20 27.9	10	11	22 24	20 58.7
12	11½	6 23	20 26.6	10	11½	23 32	20 57.6
10	11	6 49	20 56.7	10	10	23 34	20 53.6
10	10½	6 50	20 57.3	10	11½	23 35	20 57.8
10	10	7 11	21 1.0	10	10	24 17	21 6.9
10	10	7 40	21 3.7	10	11	24 54	21 6.3
10	11½	8 46	20 54.5	10	11½	24 58	21 5.5
10	11	8 48	20 59.9	10	10	25 13	20 54.6
10	11½	8 49	20 56.4	10	9	27 26	21 5.1†
12	11	10 3	20 17.3	10	11	29 15	20 53.7
12	10	10 9	20 15.7	10	10½	29 51	20 59.8
10	10	10 36	20 51.2	10	11½	30 13	20 58.0
12	11	10 38	20 19.1	10	11½	30 22	20 58.0
12	11	10 49	20 23.2	10	10	30 36	20 55.4
10	11	11 10	20 57.2	10	9½	30 52	21 0.2*
12	11	11 18	20 23.3	10	10½	30 58	20 54.4
10	10	11 40	20 55.2	10	9½	32 30	21 3.2
12	11	11 56	20 31.0	10	10½	32 40	21 3.3
12	11	12 46	20 13.1	10	10½	32 43	20 57.2
10	11	13 30	20 57.8	10	10	32 46	20 50.4
10	11½	13 53	20 54.6	10	11	34 30	21 3.9
10	11	14 4	20 59.0	10	10	34 40	20 57.8
10	10½	16 4	21 3.2	10	10½	35 54	20 56.6
10	10½	16 13	21 7.5	10	10½	36 6	20 53.4
10	10	16 31	21 2.3*	10	11	36 16	20 57.7
10	11	17 20	21 5.3	10	11½	40 39	21 3.6
10	11	18 35	20 58.6	10	11	40 47	20 55.5
10	12	18 44	20 57.3	10	11½	40 55	20 58.2
10	11	19 30	20 53.4	10	11	41 5	20 58.3
10	10½	20 49	21 0.5*	10	10½	41 48	20 55.2
10	11	5 21 9	+21 5.1	10	9½	5 42 41	+21 0.1*

* (4). † N. *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
10	10	5 43 49	+21 7.7	10	11½	6 1 43	+20 59.7
10	10	45 1	20 50.3	10	10½	2 3	20 57.4
10	12	45 6	20 55.7	10	11	2 5	20 59.4
10	11	45 10	21 0.0	10	11	3 29	20 49.5
10	9½	45 18	20 49.2	10	11½	4 24	21 6.2
10	10½	46 38	21 8.0	10	10	4 36	20 53.4
10	10	46 48	21 8.8	10	11	4 37	21 5.4
10	11½	47 50	21 3.5	10	10½	5 40	21 9.1
10	9	48 4	21 9.0	10	10	6 8	20 57.3
10	11	48 54	21 9.4	10	12	6 27	20 55.8
10	11	49 8	21 6.6	10	11	7 13	20 54.0
10	10½	49 14	20 56.3	10	10	7 22	20 57.3
10	10½	49 15	20 53.9	10	12	8 4	20 52.3
10	10½	51 0	20 57.4	10	9	8 32	20 51.4
10	10	51 26	20 53.4	10	11	8 47	20 52.0
10	10	51 48	20 52.5	10	11½	9 28	21 8.3
10	10	52 41	21 7.7	10	11½	9 35	21 4.4
10	10	52 53	20 54.5	10	11	9 50	20 59.6
10	12	53 9	20 57.4	10	10½	10 11	20 54.4
10	10½	53 37	21 7.4	10	11	11 30	21 4.4
10	11½	54 10	21 5.8	10	11½	11 31	21 6.9
10	11	54 41	20 58.3	10	11½	11 55	21 7.5
10	10½	54 58	20 53.3	10	10½	12 26	20 53.2
10	12	55 38	20 54.3	10	10½	12 59	20 52.8
10	10½	55 55	20 54.9	10	9½	13 14	21 4.2
10	10½	56 39	20 55.8	10	9	13 26	20 56.4
10	10½	56 55	20 59.0	10	11	13 29	20 53.2
10	11½	57 2	21 0.3	10	10	15 17	20 56.2
10	11½	57 12	20 57.7	10	11½	15 30	21 2.6
10	10½	58 7	20 55.4	10	11	16 10	20 52.1
10	11	5 59 13	21 9.4	10	11	16 18	21 0.0
10	10	6 0 22	20 54.4	10	9½	17 2	21 7.1
10	10	0 26	20 53.9	10	11½	17 8	21 3.6
10	10	0 33	20 53.6	10	10	17 9	20 50.8
10	11	6 0 59	+21 11.0	10	11	6 18 46	+20 57.6

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
10	11	6 19 58	+20 53.6	10	11	6 22 24	+20 53.8
10	9	20 15	20 54.1	10	11½	23 26	21 4.1
10	11	20 25	20 49.8	10	11	23 52	21 6.1
10	10½	21 15	21 8.4	10	11	26 50	20 58.8
10	10	21 20	21 11.0	10	11	27 10	20 57.5
10	11	6 22 19	+20 49.7	10	10	6 28 8	+20 55.7

APPROXIMATE MEAN PLACES, FOR JANUARY 1, 1850,

OF

580 STARS NEAR THE ECLIPTIC,

OBSERVED IN JANUARY, 1852, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
13	11	3 28 43	+22 29.7	13	11½	3 39 22	+22 27.9
13	10½	29 9	22 21.6	13	12	40 13	22 14.6
13	11	29 30	22 27.7	13	11	40 22	22 15.7
13	11½	31 17	22 29.5	13	11½	40 23	22 14.7
13	12	31 33	22 19.4	13	12	40 35	22 15.9
13	12	32 27	22 23.6	13	10½	41 43	22 11.4
13	10½	33 13	22 23.5	13	11	42 25	22 25.3
13	10½	33 58	22 21.9*	13	10½	42 25	22 14.0
13	10½	34 22	22 21.6	13	11½	42 48	22 17.7
13	10	36 12	22 14.6	13	11½	43 25	22 18.2
13	12	36 26	22 13.1	13	10½	44 44	22 14.1
13	11½	37 42	22 16.2	13	9½	45 21	22 25.9
13	12	37 43	22 26.9	13	11	45 26	22 13.0
13	10½	37 56	22 26.7	17	10½	45 53	18 31.0
13	11½	3 39 13	+22 28.5	13	11½	3 45 54	+22 15.7

* ,4).

Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′
13	12	3 46 27	+22 15.2
13	12	46 31	22 13.2
17	12	46 42	18 12.4
13	12	46 58	22 16.0
17	11	47 19	18 21.8
13	11½	47 43	22 17.4
17	12½	47 44	18 24.1
17	11½	47 44	18 25.8
17	10½	48 40	18 12.2
17	10½	48 47	18 15.0
13	11	48 52	22 28.0
13	9	48 53	22 29.1
13	10	49 26	22 28.9
17	11	49 43	18 17.8
17	12½	49 48	18 12.5
13	11½	49 58	22 17.3
17	11½	50 8	18 14.7
13	11½	50 47	22 27.4
17	11	50 47	18 13.7
17	11½	50 50	18 14.6
17	12½	50 52	18 15.5
13	11½	50 53	22 29.0
13	12	51 0	22 28.0
17	11½	51 13	18 15.3
13	12½	51 53	22 28.2
17	11	52 2	18 15.2
13	11	52 8	22 27.4
17	11½	52 20	18 23.8
13	11½	52 38	22 29.9
13	11½	52 46	22 24.8
17	10	53 20	18 21.7
17	12½	53 22	18 24.8
20	11	53 27	18 31.8
13	10	53 28	22 13.7
17	12	3 53 32	+18 25.3
13	10	3 53 36	+22 19.3
17	11	53 54	18 12.3
20	11	54 9	18 38.5
20	11	54 10	18 35.3
20	10	54 31	18 44.2
20	10½	54 32	18 41.5
13	11	54 50	22 23.3
17	10	54 51	18 17.1
13	9½	54 56	22 22.0*
13	12	55 8	22 11.5
20	10½	55 13	18 39.1*
17	11	55 15	18 13.2
13	12	55 16	22 20.8
17	12½	55 19	18 17.6
20	9½	55 37	18 47.9
17	11	55 58	18 16.8
20	11	56 2	18 43.3
17	11	56 15	18 12.2
20	11	56 16	18 42.7
13	12	56 41	22 26.2
13	12	56 46	22 27.0
17	10½	56 46	18 23.5
13	9½	56 47	22 23.5
20	10	57 16	18 32.9
13	10	57 25	22 25.7
20	11	57 34	18 37.9
17	11½	57 35	18 23.0
13	12	58 1	22 23.2
13	11½	58 10	22 23.6
13	11½	58 19	22 24.4
20	10½	58 26	18 37.9
17	11½	58 28	18 25.5
13	10½	58 45	22 17.8
20	10½	58 46	18 44.1
13	11	3 59 1	+22 10.5

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
17	11½	3 59 6	+18 11.7	17	12	4 4 50	+18 10.9
20	11	59 7	18 41.8*	17	12	5 0	18 11.1
17	9½	59 51	18 24.7	13	11½	5 5	22 12.1
13	11½	3 59 54	22 13.0	17	11½	5 14	18 27.4
17	10	4 0 4	18 20.2*	20	11½	5 14	18 33.2
17	10½	0 4	18 13.7	20	11½	5 25	18 39.2
13	12	0 11	22 17.3	13	10	5 28	22 28.7
17	10½	0 21	18 20.8*	17	9½	5 44	18 13.8
20	• 11	0 33	18 35.0	20	11½	5 46	18 37.1
20	12½	0 33	18 31.4	13	11½	6 16	22 13.3
20	12	0 34	18 33.0	17	9	6 37	18 14.5
13	11	0 57	22 27.8	13	11½	6 52	22 13.8
13	11½	0 58	22 25.4	20	11½	6 55	18 31.1
13	11½	0 58	22 29.9	17	10	7 0	18 24.1
17	10½	1 28	18 14.4	17	10	7 1	18 21.3
17	10½	1 33	18 19.8	17	11	7 2	18 10.8
20	12½	1 53	18 43.1	17	12	7 12	18 23.6
20	12	2 2	18 46.2	13	11½	7 16	22 15.5
20	11½	2 3	18 42.5	13	10½	7 28	22 23.8
20	12	2 22	18 36.7	13	10	7 41	22 24.1
13	11½	2 32	22 21.8	13	12	7 50	22 25.4
13	11	2 36	22 22.2	17	12	7 54	18 10.3
13	11½	2 44	22 18.9	20	10	8 2	18 46.4
13	10½	2 59	22 20.3	17	11	8 25	18 8.7
17	12	3 13	18 15.8	20	10½	8 30	18 45.4
17	12	3 17	18 19.9	20	10	8 33	18 34.3
13	11	3 18	22 22.9	20	10½	8 42	18 39.3*
17	10½	3 19	18 26.3	20	8½	8 50	18 48.8
17	12	3 25	18 17.0	13	12	8 58	22 26.4
20	12	3 34	18 35.4	13	11	9 19	22 28.0†
20	12	3 36	18 35.3	17	11	9 22	18 10.7
13	9½	3 41	22 18.7	17	11	9 38	18 10.4
17	11½	3 46	18 23.0	20	9	10 28	18 37.1
17 20	10	4 21	18 28.1	20	10	10 30	18 46.6
13	11	4 4 36	+22 11.2	17	12	4 10 34	+18 25.1

• (4).

† L. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
17	12	4 10 36	+18 14.8	20	10	4 15 27	+18 35.0
20	12	10 40	18 38.6	17	11	15 45	18 10.8
13	12	10 55	22 21.9*	13	12½	15 59	22 26.4
13	11½	11 9	22 28.5	17	10½	16 5	18 14.8
13	11	11 19	22 22.1	17	10½	16 13	18 13.0
13	11½	11 20	22 27.2	13	11	16 20	22 26.0
17	10½	11 24	18 19.0	13	12	16 26	22 27.2
20	11	11 45	18 48.3	17	9	16 57	18 16.3:
20	11½	11 50	18 47.7	17	11½	17 0	18 11.6‡
17	11	11 52	18 26.2	17	11	17 50	18 10.7
20	10½	12 0	18 41.7	17	11	18 5	18 10.7
17	10	12 9	18 13.1	17	12	18 38	18 6.4
13	9½	12 18	22 25.3	17	12	18 42	18 7.9
17	10	12 18	18 22.2	13	12	18 46	22 21.3
17	12½	12 44	18 23.2	13	12	18 47	22 14.4
17	10½	12 51	18 24.1	17	12	19 2	18 9.3
20	11	13 2	18 39.4	13	11½	19 8	22 17.7
20	10½	13 12	18 31.8	20	10	19 12	18 43.4
13	9½	13 23	22 18.3	17	9½	19 17	18 9.7
17	12	13 29	18 22.3†	13	10½	19 22	22 22.1
20	11½	13 31	18 46.9	13	12	19 23	22 23.8
13	11½	13 36	22 14.5	17	12	20 13	18 10.4
20	11	13 42	18 32.1	20	11½	20 25	18 31.0
13	12½	13 51	22 16.5	17	11½	20 26	18 10.5
13	10	13 53	22 28.5	13	11½	20 50	22 18.4
17	12½	13 59	18 21.7	13	10½	20 53	22 27.4
17	11½	14 2	18 13.8	17	11½	21 3	18 12.9
20	10½	14 5	18 35.7	17	11½	21 8	18 14.6
20	11	14 23	18 48·1	17	10	21 12	18 25.5:
13	11½	14 38	22 11.0	20	11½	21 25	18 34.2
20	11½	14 47	18 44.5	20	11	21 49	18 42.0
17	12½	14 57	18 12.1	17	11	22 17	18 15.8
17	11	15 14	18 11.4	20	10	22 21	18 47.5
13	12	15 21	22 27.7	20	11½	22 22	18 48.3
17	11	4 15 26	+18 10.1	13	10	4 22 33	+22 10.9

* *p.* of double. † N. *p.* of double. ‡ L. of double.

Days Obs.	Mag.	α.	δ.	Days Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	°
13	12	4 22 35	+22 19.1	20	11	4 27 57	+18 36.4
17	11½	22 35	18 15.7	20	12	28 1	18 32.8
13	10½	22 36	22 14.9	13	10½	28 18	22 16.5
13	12	22 37	22 18.0	13	12	28 40	22 17.5
17	11	22 54	18 11.3	13	9½	29 8	22 19.1
17	12	23 17	18 19.9*	13	11½	29 23	22 11.3
20	9½	23 21	18 32.1	20	10	29 32	18 39.2
20	10½	23 39	18 34.4	13	10½	29 36	22 12.7
17	11½	23 48	18 22.4	20	9	29 41	18 42.0
17	12½	23 49	18 24.5	20	8	29 47	18 46.4
20	9	24 5	18 36.7	17	12½	29 48	18 21.2
17	11½	24 10	18 25.5	13	11	30 2	22 22.2
20	11	24 26	18 38.6	17	12	30 7	18 22.3
13	12	24 37	22 12.0	13	10	30 8	22 24.6
13	12	24 39	22 11.8	13	11½	30 8	22 26.6
20	11	24 40	18 39.2	17	12	30 15	18 22.4
20	10	24 48	18 38.9	17	11	30 26	18 19.8
17	10	25 28	18 24.0	20	9½	31 5	18 49.4
13	9½	25 35	22 23.5	20	9	31 23	18 47.6
17	12	25 36	18 14.1	13	11	31 34	22 31.6
17	12	25 48	18 15.6	13	11	31 35	22 13.6
17	10	26 0	18 15.1	17	11½	31 44	18 28.0
17	12	26 12	18 16.8	20	9	31 54	18 47.6
20	9½	26 14	18 31.6	17	12	31 57	18 25.3
17		26 31	18 25.2	17	11	32 2	18 19.7
20	12	26 33	18 32.4	17	9½	32 39	18 24.0
13	11½	26 57	22 19.3	13	12	32 50	22 24.2
20	11½	26 57	18 32.8	13	12	32 53	22 19.4
20	12	27 6	18 31.7	17	9½	32 58	18 15.6
17	10	27 9	18 13.2	13	12	32 59	22 18.6
20	12	27 9	18 33.1	20	12	33 11	18 42.9
13	12	27 19	22 28.5	13	11	33 45	22 18.8
13	12	27 27	22 21.6	13		33 52	22 19.2
20	12	27 51	18 34.7	17	11	33 53	18 27.0
17	9½	4 27 54	+18 26.7	20	10½	4 33 58	+18 36.3

* N. *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
20	9½	4 34 4	+18 42.8	13	12	4 39 59	+22 28.8
20	11	34 12	18 47.2	17	9½	40 18	18 22.4
13	11½	34 16	22 32.4	13	11	40 24	22 13.3
17	11	34 16	18 25.6	13	11	40 32	22 11.5
17	11	34 35	18 27.6	13	12	40 57	22 11.0
20	11	34 42	18 42.9	13	11	41 1	22 14.0
20	11	34 49	18 43.6	20	12	41 16	18 33.6
17	11½	35 0	18 25.1	13	11½	41 17	22 12.4
13	11½	35 37	22 23.0:	17	12	41 26	18 12.3†
20	9	35 46	18 41.5	17	12	41 28	18 13.2
20	10	35 46	18 46.2	20	11½	41 33	18 34.1
20	10	35 48	18 46.7	20	9	41 34	18 34.9
17	12½	36 9	18 23.4	17	12	41 51	18 14.7
13	10	36 12	22 25.7	17	12	42 5	18 9.7
13	10	36 20	22 24.3	13	11½	42 17	22 13.6
20	9½	36 27	18 44.3	20	9½	42 26	18 36.3
17	11½	36 37	18 21.8	13	11½	42 28	22 17.1
17	11½	36 40	18 22.7	17	10½	42 31	18 27.8
13	11	36 47	22 15.7	13	11½	42 48	22 25.9
20	9½	36 47	18 44.7	17	12	42 58	18 26.5
13	10½	37 7	22 27.1	20	12½	43 7	18 43.9
20	9½	37 20	18 45.7	17	11½	43 10	18 23.1
13	12	37 38	22 26.9	20	9½	43 36	18 44.3‡
17	10½	38 13	18 25.5	20	12	43 40	18 44.5
13	10½	38 19	22 27.2	13	10	43 46	22 24.4
13	10½	38 46	22 24.8	13	12	43 47	22 23.6
13	10½	39 2	22 26.0	13	12	43 49	22 25.0
13	11½	39 3	22 27.5	17	11½	43 51	18 14.5
13	11	39 15	22 23.1	20	11	44 3	18 45.9
17	10	39 28	18 11.8	20	12	44 29	18 37.5
17	10	39 35	18 17.6*	17	10½	44 39	18 22.1
20	11½	39 40	18 38.5	17	11½	44 46	18 29.4
17	10½	39 46	18 18.1*	20	12	44 46	18 34.8
20	12	39 51	18 32.0	13	11½	45 14	22 16.4
20	9½	4 39 57	+18 42.2*	13	11	4 45 14	+22 15.3

* (4). † N. of double. ‡ Mag. doubtful.

Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′
20	8	4 45 38	+18 32.4
20	8	45 47	18 31.1
20	10	46 8	18 29.2
17	9½	46 18	18 24.5
17	9	46 25	18 11.6
13	11	46 31	22 17.9
20	11	46 36	18 35.1
17	10½	47 1	18 21.0
17	10½	47 21	18 10.3
13	10½	47 28	22 11.0
13	10½	47 30	22 21.0
13	11½	47 47	22 17.0
13	11½	47 47	22 16.5
20	12	47 47	18 36.8
17	11	47 53	18 11.3
17	10	48 7	18 10.7
17	10½	48 9	18 10.8
13	10	48 30	22 25.7*
13	10½	48 37	22 27.6
17	11½	48 41	18 9.5
17	11	48 42	18 10.2
20	8½	49 6	18 42.8
17	12	49 9	18 27.4
20	8	49 19	18 49.2
13	12	49 21	22 12.5
13	11½	49 22	22 13.3
13	11½	49 25	22 12.4
17	10	49 33	18 28.6
20	9	49 34	18 45.5
17	9	49 56	18 24.4
13	9	50 12	22 30.8
20	11½	50 13	18 35.3†
17	9½	50 17	18 25.2
20	9½	50 28	18 43.2
20	9	4 50 56	+18 34.7
17	11½	4 50 57	+18 22.9
13	10½	51 21	22 22.0
17	12	51 23	18 26.2‡
17	11½	51 39	18 24.7
20	11	51 59	18 39.4
13	11	52 2	22 23.0
13	11	52 17	22 29.8
17	12	52 48	18 22.3
17	11	52 51	18 22.8
13	10½	52 53	22 13.1
20	12	52 59	18 39.2
20	9½	53 0	18 33.1
20	12	53 7	18 39.3
17	11½	53 21	18 23.9
17	11½	53 24	18 25.3
20	10½	53 27	18 41.6
17	11½	54 13	18 10.4
17	12½	54 38	18 15.3
17	9	54 59	18 30.2
20	11	54 59	18 43.2
20	11	55 23	18 46.1
20	10½	55 40	18 46.8§
17	12	55 48	18 25.4
17	12½	55 52	18 26.5
17	12	56 6	18 21.7
20	11	56 35	18 35.2
20	11½	56 51	18 44.5
17	12½	56 54	18 13.7
17	12	56 56	18 8.0
20	12	56 57	18 42.9
17	11½	57 45	18 16.7
20	11½	57 53	18 32.5
20	11	58 8	18 48.2
20	12	58 25	18 48.4
20	11	4 58 52	+18 31.4

* N. of double. † S. of double. ‡ S. *p.* of double. § L. of triple.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
20	11	4 59 8	+18 35.3	20	12	5 8 20	+21 34.2
20	11½	59 19	18 31.7	20	12	8 36	21 34.6
17	12½	59 24	18 14.1	20	10	10 14	21 35.7
17	12	59 31	18 11.0	20	11½	14 33	21 30.9
17	12½	59 35	18 13.6	20	9½	15 59	21 36.6
17	12½	59 39	18 16.3	20	12	16 27	21 41.3
20	10	4 59 59	18 46.7	20	9	16 31	21 46.6
20	12	5 0 22	18 44.3	20	11	18 41	21 33.0
20	10	0 36	18 45.0	20	9½	19 47	21 44.4
20	11	0 41	18 45.8	20	11	19 53	21 45.4
17	11½	0 42	18 11.6	20	10	21 50	21 28.2
17	12	0 49	18 12.8	20	10	22 3	21 30.1
17	10	1 3	18 14.4	20	11	22 47	21 31.0
17	11½	1 41	18 24.2	20	10	24 34	21 35.2
17	11½	1 46	18 24.9	20	11	25 15	21 45.6
20	11	2 0	18 48.4	20	11½	26 19	21 31.9
17	9½	2 1	18 23.7	20	11½	26 32	21 33.7
20	10	2 10	18 35.1	20	12	27 29	21 31.9
20	11½	2 12	18 39.3	20	11	27 29	21 29.3
20	9½	2 36	18 35.7	20	11	27 39	21 31.9
20	9	2 42	18 34.8	20	9½	28 25	21 40.2
17	11½	2 43	18 14.1	20	11	29 4	21 34.7
17	11½	2 53	18 12.8	20	10	31 26	21 38.6
17	11½	3 2	18 13.3	20	11	32 27	21 35.9
20	11	3 13	21 28.7	16	10½	32 53	19 27.5
20	11	3 19	21 31.3	16	10½	32 54	19 27.8
20	11	3 25	18 42.9	16	10½	33 25	19 11.7
20	11	3 40	21 31.6	16	11½	34 1	19 28.6
20	11	3 45	21 35.9	20	12	34 3	21 33.1
20	9	4 3	18 42.2	16	11	34 19	19 26.1
20	10½	5 6	21 45.9	16	9	34 41	19 28.0
20	12	5 24	21 45.1	20	10	35 0	21 44.0
20	9½	5 44	21 45.6	20	11	35 7	21 44.9
20	11½	6 43	21 39.2	20	12	35 11	21 43.5
20	10	5 6 54	+21 38.9	20	12	5 35 15	+21 42.3

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
16	11	5 35 28	+19 23 8	16	11	5 42 27	+19 14.5
16	10½	35 45	19 27.5	16	11	42 34	19 13.9
16	10	36 0	19 22.5*	20	10	42 39	21 29.6
20	11	36 4	21 46.9	16	11	43 20	19 13.2
20	9	36 9	21 43.2	16	12	44 24	19 14.1
20	10	36 40	21 44.2	16	11	44 29	19 23.5
16	10½	37 17	19 16.4	20	10½	44 37	21 31.7
16	9½	37 24	19 17.6	20	11	44 40	21 29.1
16	10½	37 41	19 13.0	16	10½	44 42	19 16.7
16	11½	37 59	19 15.0	16	12½	44 49	19 17.7‖
20	8½	38 1	21 36.7†	20	11	45 26	21 46.5
20	11½	38 29	21 39.5	20	10½	45 28	21 30.6
20	11	38 45	21 32.9	20	11	46 39	21 42.5
16	11	38 46	19 29.6‡	20	11½	46 42	21 43.6
16	11½	39 18	19 18.8†	16	12	47 37	19 14.5
16	10½	39 23	19 13.5	16	12	47 46	19 15.3
16	11	39 30	19 21.1§	20	11	48 33	21 30.4
16	10½	39 51	19 15.5	20	11	48 46	21 30.8
20	9½	39 55	21 41.0	16	10½	48 48	19 13.2
20	9	40 17	21 35.5	20	11	49 38	21 31.2
20	9	40 24	21 33.7	20	9	49 49	21 38.6†
16	10	40 26	19 20.8	20	10½	51 4	21 29.0
20	8	40 38	21 46.6	20	12	52 25	21 33.4
16	11	40 43	19 29·2	20	12	52 25	21 32.5
20	11½	41 20	21 29.7	20	11½	52 44	21 32.4
20	11½	41 47	21 31.2	20	10½	52 46	21 34.2
16	11	41 53	19 17.2	20	9½	53 40	21 29.7
16	12½	41 58	19 15.5	20	10	54 12	21 44.9
16	10	41 59	19 11.8	20	10½	54 26	21 43.6
20	11	5 42 1	+21 30.1	20	10	5 54 56	+21 30.3

* L. of double. † (4). ‡ S. *p.* of double.
§ S. *f.* of double. ‖ N. *p.* of double.

APPROXIMATE MEAN PLACES FOR JANUARY 1, 1850,

OF

985 STARS NEAR THE ECLIPTIC,

OBSERVED IN FEBRUARY, 1852, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
10	11½	4 56 4	+25 34.1	10	12	5 9 2	+25 33.3‖
10	10½	56 7	25 48.2	10	10	10 6	25 37.6
10	11½	56 52	25 46.1	10	11½	10 8	25 35.8
10	10½	57 3	25 35.5	10	11½	10 13	25 34.0
10	10	57 5	25 49.5	10	11	10 28	25 43.2
10	12	57 47	25 48.8	10	12	12 11	25 44.9
10	10	57 55	25 49.5	10	12½	12 42	25 36.4
10	12	57 56	25 48.0	10	12	13 19	25 47.7
10	11	58 34	25 28.4*	10	11	14 7	25 35.9
10	11	59 15	25 33.7	10	10½	15 11	25 48.4
10	9	59 19	25 44.1	10	11½	15 36	25 46.4
10	11½	59 26	25 35.6	13	11½	15 55	19 32.3¶
10	12	4 59 34	25 35.2	13	11	15 55	19 31.2
10	10	5 0 28	25 34.0†	13	11	15 56	19 43.3
10	10	0 30	25 36.8‡	13	10½	16 7	19 39.1
10	10½	1 35	25 46.7	13	10½	16 10	19 33.8
10	9	1 45	25 46.2	10	12½	16 50	25 37.1
10	11½	1 48	25 45.2	13	11½	17 27	19 47.3
10	9½	2 54	25 34.8	13	9½	17 28	19 49.6‡
10	10	3 5	25 41.2§	13	9½	17 38	19 39.5§
10	10	3 11	25 32.7	13	10	17 48	19 47.0
10	10	4 25	25 28.9	10	12	18 2	25 39.3
10	12	4 40	25 37.9	10	11	18 11	25 48.5
10	11	5 7	25 32.1	13	11½	18 55	19 33.2
10	11½	6 1	25 30.9	13	11½	19 9	19 41.4
10	12	6 34	25 47.5	10	12	19 10	25 31.3
10	10½	7 16	25 39.4	13	11½	19 10	19 33.4
10	10½	7 33	25 35.4	13	11½	19 11	19 35.1
10	12	8 50	25 36.8	13	11½	19 14	19 33.3
10	12	5 8 52	+25 34.3	10	10½	5 19 28	+25 45.4

* L. of double. † S. *f.* of double. ‡ N. *p.* of double. § (4).
‖ *p.* of double. ¶ Double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
10	12	5 19 43	+25 41.2	13	11	5 30 51	+19 38.8
13	9½	20 4	19 31.2	13	11	30 53	19 38.2
13	9½	20 54	19 38.7	10	11½	30 58	25 43.4
13	12	21 2	19 34.9	10	12	31 14	25 46.8
13	10½	21 13	19 49.2	10	10	31 36	25 47.2
10	12	21 16	25 46.6	10	10½	31 47	25 44.6
13	10	21 38	19 44.3	13	10	32 9	19 48.7
10	11½	21 48	25 43.9	13	11½	32 15	19 43.9
13	11½	22 7	19 36.1*	13	10½	32 45	19 42.0
13	11	22 7	19 34.2	13	9	32 56	19 43.6
13	11½	22 12	19 35.3	10	10½	32 59	25 42.2
10	11½	22 37	25 44.5	10	12	33 6	25 36.1
10	10	22 46	25 45.1	10	11	33 33	25 38.8
13	12	22 55	19 38.4	13	10	33 44	19 44.3
13	10	23 19	19 37.7	13	9	33 57	19 46.2
10	12	23 55	25 45.8	13	11	34 21	19 44.1
10	10	24 42	25 41.5	13	10½	34 28	19 46.2
10	10	24 44	25 30.9	13	9½	35 16	19 47.3
13	11	24 44	19 33.1	13	12	35 31	19 36.2
13	11	25 30	19 39.5	13	11	35 39	19 37.2
13	10½	26 9	19 31.9	13	10½	35 51	19 41.6
13	11	26 30	19 34.0	13	11	35 59	19 41.9
10	9½	26 39	25 35.7	10	10	36 16	25 39.7
13	10½	27 24	19 44.2	13	11	37 18	19 47.1
10	12	28 0	25 36.8	13	10	37 28	19 39.4
13	10	28 16	19 49.3	13	11	37 59	19 36.0
13	11	28 21	19 44.5	13	8½	38 51	19 32.5
10	10	28 27	25 42.8	13	8½	38 54	19 37.5
10	9	28 39	25 30.8	13	11	39 31	19 31.5
10	11	28 46	25 39.4	13	9	40 16	19 45.6
13	9½	29 8	19 34.6	10	10½	40 19	25 39.1
10	11	29 32	25 46.7	10	10½	40 45	25 47.4
10	11	29 45	25 51.8	13	10½	40 52	19 38.6
13	10½	30 22	19 41.9	13	11	41 5	19 34.6
13	11	5 30 38	+19 33.4	13	11	5 41 6	+19 38.2

* *f.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
13	10	5 41 8	+19 31.7	10	11½	5 49 18	+25 36.2
10	11	41 17	25 43.6	13	11	49 59	19 33.4
10	12	41 31	25 48.7	10	11½	50 18	25 32.1
13	9	41 45	19 38.6	13	9	50 18	19 31.3
10	11½	41 54	25 46.2	10	11½	50 59	25 47.3
13	9	42 9	19 49.3	10	11½	50 59	25 48.0
13	10½	42 41	19 46.1	10	11½	51 8	25 47.7
13	10	42 49	19 33.7	10	11	51 53	25 35.0
10	9	43 19	25 42.0	10	10½	51 57	25 37.2
10	10	43 42	25 41.5	13	8	52 2	19 48.2
10	9½	43 42	25 43.5	10	10½	52 28	25 35.4
13	11	43 50	19 31.1	13	11	52 28	19 45.8‡
10	10	43 51	25 45.3*	10	10½	52 33	25 37.3
13	11	44 20	19 31.8	13	11	52 58	19 42.9
13	10	44 34	19 31.0	13	11½	53 6	19 44.4
13	9	44 43	19 35.1	10	10	53 27	25 45.4
10	10½	45 33	25 47.5	10	9½	53 52	25 42.1
13	11	45 44	19 41.1	10	10	54 6	25 42.8
10	12	46 3	25 46.8	13	10½	54 40	19 47.4
13	8	46 7	19 34.2	13	10	54 43	19 44.5
10	10½	46 14	25 48.3	13	10½	55 1	19 45.7
10	9	46 16	25 46.3:	10	10½	55 5	25 47.2
10	9½	46 40	25 31.8	10	10½	55 38	25 38.5
13	10½	46 43	19 42.8	13	10½	56 4	19 32.6
10	10	47 37	25 42.6	13	11½	56 7	19 32.6
10	12	47 38	25 43.0	10	11	56 8	25 35.3
13	9½	47 44	19 42.8	13	10	56 50	19 47.6
13	10	47 56	19 42.7	10	11	56 50	25 30.9
10	11½	48 7	25 44.3	10	11	56 53	25 33.1
13	10	48 7	19 34.7	13	11	57 4	19 43.2
10	9½	48 8	25 43.5	13	9	57 9	19 48.8
13	10	48 13	19 37.3	10	9	57 31	25 33.7
10	11	48 14	25 33.4	10	10	57 39	25 49.1§
13	9½	48 28	19 38.3†	10	11	57 46	25 46.6
10	12	5 49 5	+25 33.4	13	9½	5 58 0	+19 43.4

* L. of double. † (4). ‡ L. of group. § N. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
13	9	5 58 4	+19 38.3	13	11	6 6 13	+19 43.1
13	9	58 48	19 42.8	10	11½	6 23	25 34.8
13	10½	59 15	19 49.1	13	9	6 37	19 33.8
10	12	59 25	25 35.1	10	11½	6 42	25 35.7
10	10½	5 59 27	25 35.2	10	11	7 19	25 46.6
10	10	6 0 15	25 41.8	13	8½	7 25	19 38.7*
13	10	0 19	19 33.3	13	11	7 40	19 45.7
13	8½	0 20	19 46.6	13	9	8 7	19 38.3
13	10	0 27	19 32.6	13	9	8 10	19 45.8
13	10½	0 37	19 32.4	10	11½	8 16	25 46.8
10	11	0 45	25 33.2	10	12	8 40	25 46.6
10	10	0 57	25 34.1	10	11	8 52	25 45.2
13	9½	1 15	19 32.1	24	11	9 32	19 51.5
13	10	1 30	19 33.4	24	10	9 35	19 54.3
13	10	1 36	19 33.5	13	11	9 44	19 38.9
10	10	1 38	25 37.3	13	10½	9 47	19 33.7
10	9½	1 50	25 36.0	13	12	9 48	19 37.6
10	9½	1 57	25 31.5	24	10	10 4	19 57.5†
10	9	2 9	25 34.7	24	10½	10 35	20 5.4
13	9	2 36	19 43.4	10	10	10 41	25 38.4
13	11½	2 39	19 49.0	13	10½	10 51	19 49.3
13	11½	2 51	19 48.5	24	11	10 51	20 4.2
10	9	3 26	25 43.6	13	11	10 54	19 48.1
10	11½	3 26	25 46.3	13	10½	11 1	19 48.2
10	10	3 35	25 39.9	10	11	11 4	25 39.3*
13	10½	3 36	19 31.3	24	10	11 28	20 8.3
13	12	3 42	19 34.0	13	10½	12 4	19 35.4
13	10½	3 52	19 34.4	24	11	12 14	20 8.4
10	9½	4 11	25 42.9	13	12	12 16	19 35.4
13	9	4 27	19 46.6	24	11	12 18	20 6.0
13	10	4 58	19 34.8	13	10	12 24	19 34.3†
13	8½	5 13	19 39.5*	10	11½	12 30	25 45.9
13	9½	5 31	19 38.1	10	10½	12 51	25 45.4
10	11	6 1	25 36.7	10	11	13 24	25 38.3
10	11	6 6 11	+25 36.0	10	11	6 13 29	+25 39.4

* (4). † L. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
13	12	6 13 41	+19 35.1	24	9½	6 19 23	+20 8.7
13	11	13 46	19 32.4	10	12	19 47	25 45.9
24	8½	13 53	20 5.0	13	11	19 51	19 34.7
24	9½	14 8	20 4.4	13	11	19 54	19 35.9
24	9	14 21	20 4.0	10	11½	19 55	25 45.0
24	10	14 25	20 5.0	13	9½	20 2	19 34.6
10	9½	14 48	25 47.3	10	9	20 9	25 48.5
13	11	15 11	19 42.1	24	9	20 24	19 58.1
13	11½	15 13	19 43.7	13	11½	20 40	19 31.1
13	10	15 15	19 45.2	24	9	20 42	19 59.6
13	10	15 16	19 46.5	24	9½	21 10	20 2.5
10	10	15 33	25 34.7	10	10	21 12	25 49.7
24	10	15 33	19 58.5	13	10½	21 19	19 37.1
10	10½	15 35	25 33.8	13	9	21 34	19 42.4
13	9½	15 50	19 46.4	13	9	21 35	19 48.4
24	9½	15 56	19 59.4*	24	9	21 42	20 9.2
24	9	16 9	19 55.2†	24	9	21 52	20 6.9
13	10	16 11	19 34.6	24	10	21 53	20 3.9
10	10	16 32	25 37.0	13	8½	21 55	19 36.9
13	10	16 32	19 33.8	24	9	22 11	20 9.1
13	8	16 46	19 31.2	10	10	22 15	25 43.6‡
10	9½	16 50	25 39.4	24	9	22 31	20 5.7
13	9½	17 22	19 35.3	10	10	22 32	25 42.7
10	11	17 24	25 43.6	10	10½	22 38	25 34.8
24	10½	17 51	19 54.0	13	11	23 4	19 42.5:
13	9½	18 1	19 44.6	24	10	23 10	19 58.7
10	10½	18 8	25 47.5	13	10	23 18	19 41.4
13	10½	18 25	19 42.1	13	11	23 30	19 47.2
10	11	18 27	25 49.3	10	10	23 52	25 37.4
13	9	18 33	19 32.5	10	11	23 56	25 35.7
13	10	18 49	19 33.7	10	11	24 15	25 35.3
24	11	18 50	20 2.5	24	10	24 16	20 5.9
24	10	18 56	20 9.8	13	11½	24 29	19 32.2
24	9	19 5	20 5.1	13	11½	24 32	19 34.1
24	9½	6 19 10	+19 58.2	13	10½	6 24 35	+19 32.1

* (4). † L of double. ‡ S. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
13	10	6 24 56	+19 30.9	13	10	6 31 14	+19 42.9
10	9	25 9	25 47.0	24	9	31 14	20 7.7
24	9½	25 11	20 4.0	13	11	31 20	19 45.5
24	11	25 12	19 56.3	24	9	31 24	20 4.6
13	11	25 36	19 31.6	13	10	31 54	19 38.7
24	11	25 37	20 4.5	10	10½	32 45	25 36.4
13	12	25 38	19 35.0	13	11½	32 46	19 39.0
24	10	25 43	20 5.1	13	11½	32 54	19 39.8
24	9	26 2	19 54.3	24	9½	33 2	19 52.7
24	9	26 30	20 4.0	10	11	33 16	25 37.1
13	11½	26 31	19 45.0	24	10	33 19	19 52.5
13	9	26 46	19 37.3	13	11	33 35	19 43.9
13	9½	26 55	19 35.3	24	11	33 48	20 9.0
13	9	27 3	19 35.3	10	11½	33 50	25 33.5
24	10½	27 8	20 3.2	24	8	34 7	20 6.6
24	11	27 13	20 5.8	24	11	34 19	19 51.9
24	8½	27 26	20 5.2	24	11	34 30	19 52.9
24	9	27 42	19 56.7	13 24	9	34 50	19 52.4
13	9	27 50	19 49.3	13	10	35 1	19 31.9
10	10	28 16	25 36.7	24	9½	35 25	20 4.5
10	10½	28 34	25 48.7	13	10	35 28	19 31.5
13	10½	28 46	19 47.2	13	9½	35 31	19 48.2
10	11	28 50	25 39.8	24	8	35 46	20 7.9
24	8½	28 51	20 4.1	13	11½	36 2	19 49.7
13	10½	28 52	19 46.3	13	11	36 27	19 32.1
13	10½	28 53	19 43.1	24	9½	36 53	19 56.1
13	8	29 3	19 33.3	13	11	36 59	19 38.3:
24	8	29 14	20 0.0*	24	8½	37 6	19 53.8
13	10	29 58	19 45.0	24	10	37 27	19 53.9
13	9½	29 58	19 31.0	13	9½	37 32	19 47.5
24	10½	30 1	20 4.4†	13	9½	37 35	19 48.3
24	10½	30 5	20 4.4	13	11	37 39	19 43.1
10	11½	30 59	25 42.5	13	11	37 41	19 43.4
24	9	31 2	20 0.0	24	10½	38 0	19 52.8
10	11½	6 31 12	+25 42.2	24	11	6 38 12	+19 53.0

* (4). † Double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
24	9½	6 38 21	+20 3.3	25	11	6 43 0	+19 27.9
13	11	38 53	19 44.4	25	11½	43 6	19 24.4
13	11½	39 0	19 44.1	13	9	43 9	19 31.4
13	11½	39 5	19 44.3	13	11	43 11	19 33.6
25	9	39 6	19 20.1	25	10½	43 24	19 13.0
13	10	39 16	19 36.6	13	11½	44 10	19 37.0
25	10½	39 21	19 20.1	13	11½	44 13	19 35.3
25	11	39 42	19 21.8	24	10½	44 21	20 9.9
24	11½	39 52	20 2.6	25	11½	44 28	19 28.9
24	11	39 54	19 55.9	25	12	44 32	19 26.4
25	9½	39 54	19 23.5	24	11	44 35	20 5.2
24	11½	39 55	19 55.2	13	11	44 43	19 39.0
24	10	40 1	19 52.8	13	10½	44 57	19 39.1†
13	11	40 4	19 38.5	24	9½	44 59	20 0.1
13	11	40 5	19 39.1	24	9½	45 22	20 4.3
13	9	40 10	19 32.7	13	9½	45 28	19 45.0::
24	10	40 23	20 6.6	25	11	45 29	19 16.6
24	9½	40 30	19 51.6	24	9	45 56	20 1.5
13	9	40 39	19 32.5	25	12	46 13	19 24.3
24	9	40 47	19 52.4	25	12	46 15	19 26.0
24	9½	41 10	19 55.1	24	9	46 36	19 52.9
25	11½	41 20	19 14.9	25	9½	46 36	19 27.8
25	11½	41 23	19 15.9	25	9½	46 39	19 28.7
24	10	41 28	19 55.7*	24	9	47 2	19 57.0
25	10½	41 34	19 27.0	13	10½	47 5	19 48.1
24	7½	41 39	20 8.0	13	10½	47 8	19 47.9
13	8	41 47	19 46.2	24	10½	47 14	19 53.7
13	10	41 49	19 42.8*	13	9	47 16	19 41.5
13	10½	42 10	19 38.1	24	8½	47 34	20 7.0
25	12	42 14	19 29.6	24	9	47 39	19 51.4
13	11	42 20	19 45.8	25	10½	47 41	19 27.6
24	11	42 38	20 7.2	25	11	48 4	19 18.2
25	11½	42 40	19 28.8	25	10½	48 33	19 18.1
24	9½	42 43	20 8.9	25	11½	48 36	19 18.0
24	9	6 42 50	+20 7.2	13	12	6 48 38	+19 43.3

* L. of double. † *p.* of 3.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
25	11	6 48 41	+19 18.2	25	9	6 53 39	+19 28.0
13	10½	48 44	19 44.7	25	9	53 40	19 30.5
13	9	48 49	19 46.6	13	11½	54 25	19 37.5
24	9	49 4	19 52.8	13	9	54 28	19 32.4
25	10½	49 25	19 18.0	24	8	54 33	20 8.9
25	11½	49 30	19 29.7*	13	10	54 34	19 36.1
24	10½	49 58	19 51.5	24	9½	54 41	20 10.5
13	9½	50 15	19 37.6	24	9	54 46	20 8.3†
13	11	50 16	19 39.6	25	11½	54 48	19 26.4
25	11½	50 22	19 26.4	13	11	55 19	19 32.4
25	11	50 24	19 27.6	25	10	55 34	19 15.0
13	11	50 28	19 37.3	13	10½	55 36	19 34.4
13	9	50 31	19 48.3	13	10½	55 38	19 38.9
13	11	50 35	19 38.3	25	11	55 43	19 13.0
13	9	50 41	19 42.3	24	10½	55 45	20 1.7
24	9	50 44	19 52.7	24	11	55 47	19 54.0
24	11	50 50	20 6.3	25	11	55 48	19 12.6
24	10	50 52	20 8.3	13	11	56 11	19 44.2
13	10	50 54	19 41.8	13	10	56 24	19 44.6
25	12½	50 57	19 11.7	24	10	56 27	20 4.6
24	10½	51 12	20 4.7	25	12	56 38	19 26.9
25	10	51 32	19 30.2	25	12	56 57	19 25.0
25	10½	51 33	19 27.9	13	10	57 11	19 50.9
24	8½	51 41	20 9.9	13	11	57 18	19 50.9
25	11	52 4	19 11.4	13	10½	57 34	19 50.9
13	11	52 14	19 45.3	24	9	57 36	19 55.3
13 24	8	52 17	19 49.2	13 24	9	57 45	19 52.6
24	10	52 17	19 51.3	13	10	57 51	19 52.5
13	9½	52 23	19 44.3	25	10	58 16	19 15.5
13	9½	52 33	19 43.0	13	9½	58 17	19 40.6
25	11	52 41	19 27.5	13	10½	58 24	19 40.6
13	9	53 1	19 38.0	13	12	58 29	19 32.3
24	9½	53 10	20 4.3	24	9	58 32	19 54.4
24	9	53 22	20 12.5	25	10	58 34	19 16.1
24	10	6 53 35	+20 2.4	24	9	6 58 40	+19 51.4

* Double.

† L. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
24	10½	6 58 56	+19 51.2	24	10	7 4 54	+20 4.2
24	10½	59 23	19 53.1	13	10	4 58	19 47.2
25	11	59 27	19 27.7	24	9	5 10	20 2.9
25	10	59 38	19 28.0	25	12	5 17	19 14.8
13	12	59 48	19 34.2	24	7½	5 49	20 6.8
13	12	59 51	19 32.0	25	10	6 8	19 28.8
24	9½	6 59 59	19 53.4	24	9½	6 12	20 4.8
25	11	7 0 0	19 17.4	13	9	6 48	19 50.4
13	8	0 5	19 33.6	25	10	7 27	19 19.3
24	10	0 14	19 59.5*	24	10½	7 40	19 52.0
25	8½	0 14	19 18.2	24	10½	7 44	19 52.8
25	11½	0 36	19 15.4	24	11	7 49	19 54.0
24	8½	1 3	19 57.3	25	11	8 9	19 27.5
13	9½	1 4	19 37.2	25	10½	8 16	19 22.7
13	9	1 23	19 32.5	13	9½	8 20	19 29.7
24	11	1 36	19 56.7	24	10½	8 34	20 7.6
24	7	1 43	20 2.6	24	11	8 44	20 5.8
24	9½	1 44	19 52.4	25	10½	9 12	19 15.8
24	10	1 57	19 57.1	25	9	9 37	19 17.8
13	10½	2 2	19 34.9	25	9½	9 44	19 11.5
24	10½	2 15	19 59.7	24	9½	9 56	19 54.1
25	9½	2 24	19 12.9	24	9	9 57	20 7.0†
25	9½	2 25	19 18.5	25	9½	10 16	19 18.3
24	9½	2 35	19 59.1	24	9	11 1	19 58.9
13	11	2 40	19 32.0	25	11	11 5	19 19.8
25	9½	3 9	19 23.5	25	11	11 9	19 18.0‡
25	11½	3 21	19 13.9	24	11	11 18	19 59.9
25	10½	3 23	19 12.1	24	11	11 34	19 59.6
24	10	3 41	20 10.1	24	9	11 44	20 3.4
13	11½	3 44	19 48.2	25	11	11 46	19 25.6
13	10	3 48	19 49.3	24	10	11 55	19 57.9
24	10½	4 9	20 3.9	25	11	12 7	19 27.8
13 25	10	4 12	19 32.2	25	10½	12 34	19 23.7
13	11½	4 22	19 33.7	25	11	12 38	19 25.4
24	11	7 4 29	+20 5.7	25	9	7 12 46	+19 29.2

* (4). † L. of 3. ‡ L. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
24	10	7 13 10	+19 53.0	24	10½	7 22 17	+20 3.1
24	10	13 12	19 52.1	24	11½	22 17	20 4.5
24	9	13 13	20 1.3	25	10	22 27	19 17.2:
25	10½	13 19	19 23.2	24	11	22 57	20 2.6
25	9½	13 55	19 26.7	24	9	23 5	20 5.0
24	10	13 57	20 7.8	25	12	24 0	19 22.2
24	9	14 32	20 9.2	25	12	24 7	19 27.7
25	10½	14 38	19 22.8	25	11	24 12	19 22.7
24	9	14 41	20 8.9	25	12	24 28	19 22.1
24	9	15 3	20 2.3	25	10½	24 40	19 17.9
25	10	15 9	19 23.2	24	11	24 42	20 2.9
25	10	15 12	19 24.0	25	11	24 45	19 14.8
24	10	15 20	20 8.6	25	11	24 45	19 12.4
25	10	15 49	19 26.4	24	11	24 45	19 56.5
24	12	16 1	20 1.8	24	11½	24 46	19 53.9
24	8	16 17	20 13.1	24	10	24 54	19 58.6
24	12	16 17	20 3.3	24	12	24 56	19 53.2
25	10	17 11	19 21.1	24	12	25 9	19 53.7
24	9	17 31	19 53.8	24	10½	25 50	19 52.5
24	10½	17 35	19 51.4	24	9	26 5	19 55.9
24	10	17 42	19 54.1	24	10½	26 5	19 52.8
25	12½	17 49	19 15.6	24	11	26 8	20 3.2
25	11	18 4	19 12.0	25	10	26 13	19 20.2:*
24	10½	18 19	20 9.4	25	10	26 32	19 22.5
24	10½	18 29	20 9.8	25	10	26 54	19 18 6†
24	8	18 42	20 7.8	24	11	27 38	19 53.5
24	11	19 53	19 53.1	24	10½	27 45	19 53.7
24	11	20 7	19 52.6	25	9	28 21	19 24.3
25	11	20 11	19 22.7*	25	9	28 29	19 25.8
25	9½	20 26	19 13.6	24	11	28 30	20 6.0
24	11½	21 1	19 55.9	24	9	28 30	20 1.8
24	11	21 1	19 54.4	25	11	28 30	19 28.5
24	11	21 1	19 53.1	24	11	28 35	20 6.1
25	10	21 20	19 16.1	24	11	28 37	20 8.5
25	10	7 21 51	+19 28.2	24	11	7 28 39	+20 1.6

* (4). † Double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
24	11½	7 30 11	+19 56.6	24	10½	7 37 36	+19 59.8
25	10½	30 11	19 21.6*	24	9½	38 1	20 6.5
24	11½	30 13	19 57.4	25	9	38 2	19 15.8
24	11	30 24	19 57.8	25	9½	38 3	19 24.7
24	8	30 40	20 7.1	24	9	38 50	20 5.7
25	9	31 19	19 9.8	24	12	39 3	20 5.0
24	10½	31 31	19 56.6	24	10½	39 30	20 4.3
24	11	31 33	19 55.1	24	9	39 30	20 7.5
24	9	31 40	19 58.6	24	11	39 34	20 8.5
24	10½	31 41	19 55.3	24	10	40 38	20 5.5
25	9	32 0	19 13.1	25	11½	40 51	19 25.9
24	9	32 8	19 56.2	25	10½	41 9	19 23.8‡
25	9½	32 28	19 19.0	25	10½	41 10	19 26.7
25	11	32 43	19 27.2	24	12	41 16	20 6.2
25	11	32 54	19 24.3	25	11½	41 23	19 25.7
25	11	33 6	19 28.3	25	10	41 51	19 15.9
24	10	33 12	20 7.9	24	11	42 8	20 7.6
24	10½	33 17	20 3.7	25	10½	42 36	19 28.3
24	9½	33 46	20 9.3	25	10	42 49	19 19.5
25	10½	33 56	19 16.1	24	10½	42 57	20 4.5
24	9½	34 25	20 8.4	24	10	43 5	19 56.8
24	9½	34 43	20 2.8	24	9	43 14	19 53.3
25	9½	34 46	19 12.4	25	11	43 17	19 16.4
24	10	34 49	20 2.2	25	11	43 23	19 20.1
24	10	35 5	20 2.9	25	11	43 25	19 16.3
24	10½	35 12	20 2.5	25	10	43 31	19 18.1
25	10½	35 29	19 16.8	24	9½	43 56	19 49.8
25	9½	35 29	19 14.7	25	10	44 26	19 21.2†
25	10	36 21	19 16.8	24	10	44 30	19 55.9
25	9	36 31	19 24.6	24	11	44 49	19 55.8
25	10	36 37	19 28.2	25	11	44 50	19 31.5
24	9½	36 43	19 54.7	24	11	45 10	19 57.6
24	10½	37 8	19 56.7	24	11	45 11	19 53.0
24	9½	37 20	19 58.9†	24	9	45 13	19 54.2
25	9½	7 37 33	+19 27.1	24	10	7 45 52	+20 8.1

* (4). † L. of double. ‡ Mag. doubtful.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
25	10½	7 46 23	+19 26.4	25	10	8 0 4	+19 25.9
24	10	46 51	20 8.7	25	9½	0 7	19 26.7
25	8	47 8	19 13.8	25	9	1 22	19 20.0*
24	10	47 10	20 3.9	25	8	1 22	19 12.8
25	11	47 11	19 22.8	25	9	1 55	19 14.8
25	9	47 23	19 16.0	25	11	2 3	19 14.9
24	10½	47 29	20 3.2	25	10½	2 45	19 29.8
25	11	47 46	19 17.8	25	9	3 23	19 15.8
25	9½	48 32	19 17.2	25	9	3 29	19 23.3
24	9	48 49	20 7.5	25	9½	3 53	19 23.1*
24	8½	48 58	20 10.9	25	9½	4 1	19 29.7
24	10	49 26	19 51.9	25	9½	4 19	19 19.2
25	11	49 32	19 16.2	25	9	5 15	19 26.7:
25	11	49 46	19 13.8	25	12	5 56	19 12.6:
25	9	49 51	19 17.3	25	10½	6 34	19 13.7
25	11	49 57	19 16.1	25	9½	6 55	19 14.9
25	10½	50 46	19 28.6	25	10½	7 58	19 30.1
25	10½	50 48	19 26.7	25	11½	8 2	19 27.1
25	10	51 7	19 24.5	25	11½	8 3	19 30.7
25	11	51 25	19 13.0	25	10½	9 21	19 20.6
25	10½	52 11	19 13.7	25	10	9 21	19 16.0
25	11½	52 49	19 27.7	25	10½	9 24	19 16.5
25	11	53 5	19 26.8	25	10	9 42	19 16.3
25	9½	53 10	19 24.7	25	10	9 44	19 14.1
25	9½	53 57	19 26.5	25	8½	9 51	19 17.0
25	11	54 47	19 24.9	25	11	11 5	19 12.0
25	11	54 54	19 15.3	25	11½	11 39	19 27.4
25	10	55 9	19 17.1	25	9	11 51	19 27.7
25	12	56 27	19 17.5	25	9	12 11	19 24.0
25	8½	56 46	19 22.7	25	8	12 11	19 12.3
25	9½	57 3	19 26.9	25	10	12 25	19 20.3
25	9	57 17	19 25.0	25	11	14 8	19 24.7
25	9½	58 16	19 14.7	25	11	14 12	19 13.8
25	10	58 42	19 17.1	25	10	14 18	19 18.0
25	9	7 58 52	+19 16.7	25	10	8 14 42	+19 29.4†

* (4). † L. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
25	9	8 15 1	+19 23.5	25	8½	8 38 0	+19 18.2
25	9½	15 41	19 24.8	25	10½	38 2	19 15.9
25	10	16 45	19 24.1	25	11½	38 41	19 12.8
25	8½	17 16	19 15.7	25	9	39 29	19 13.6
25	10	19 13	19 16.2	25	10	39 45	19 18.0
25	9	19 20	19 17.3	25	10	40 18	19 23.7
25	10½	19 45	19 28.6	25	11	40 38	19 28.0
25	10	20 19	19 15.4	25	11	40 50	19 22.2
25	10½	20 44	19 18.0	24	11	42 16	18 39.9
25	11	21 11	19 16.6	25	9½	42 54	19 20.7
25	9½	21 41	19 20.3	25	10	43 1	19 17.5
25	11	23 9	19 29.8	24	11	43 21	18 48.9
25	10½	26 21	19 15.8	24	11½	44 23	18 49.8
25	10½	26 27	19 15.7	24	10	44 36	18 43.3
25	10½	26 34	19 17.8	24	10	45 9	18 43.0
25	9	27 59	19 22.3	24	11	45 51	18 38.7
25	9	28 59	19 10.4	24	9½	46 40	18 42.4
25	9½	29 12	19 11.8	25	10	46 45	19 27.4
25	8½	29 20	19 12.9	25	11	47 21	19 27.9
25	9	30 3	19 10.3	24	11	47 24	18 45.6
25	10	30 18	19 19.3	24	11	47 28	18 47.1
25	9½	31 1	19 24.2	24	10	47 44	18 42.1
25	9½	31 24	19 28.1	24	9	47 49	18 42.2*
25	9½	31 55	19 28.9	25	9	47 59	19 29.0
25	10	32 13	19 25.9	25	9½	48 6	19 22.0
25	10½	32 26	19 10.2	24	11½	48 24	18 35.4
25	10	32 59	19 28.2	24	11½	48 35	18 38.3
25	10	34 11	19 23.7	25	10	48 39	19 28.1
25	11	34 24	19 16.6	25	9	49 22	19 18.7
25	10	34 31	19 29.5	24	12	49 30	18 48.1
25	9	35 14	19 20.3	24	11	49 32	18 48.2
25	12	35 30	19 14.1	25	10	50 3	19 15.1
25	12	35 44	19 16.5	25	10½	50 32	19 25.7
25	8½	36 44	19 26.0	25	10	50 35	19 32.8
25	9	8 37 23	+19 17.9	24	10½	8 50 50	+18 42.4*

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
24	12	8 50 54	+18 36.8	24	9	9 9 44	+18 36.7
24	12	52 9	18 47.7	24	9½	10 26	18 33.7
24	12½	52 24	18 46.1	24	9	10 44	18 33.5
24	10	53 10	18 46.2	24	9	10 55	18 37.0
24	11	53 34	18 42.8	24	11½	11 19	18 45.4:†
24	11	53 44	18 47.5	24	11	12 35	18 48.5
24	9	53 57	18 39.3*	24	8½	12 38	18 48.1
24	9	54 17	18 38.3	24	11	13 1	18 49.2
24	9	55 17	18 29.7	24	11½	14 5	18 37.4
24	10	56 39	18 29.4	24	9½	14 31	18 48.0
24	11	56 43	18 37.1	24	11	15 31	18 42.9
24	10	57 20	18 47.8	24	11	15 37	18 44.3
24	9	57 50	18 52.4	24	11	16 25	18 31.6
24	10	57 59	18 53.1	24	12	16 53	18 29.5:
24	10½	58 22	18 48.9	24	11½	17 55	18 50.3
24	10	58 53	18 46.8	24	10½	19 15	18 47.1
24	10	8 59 48	18 41.5	24	9½	19 39	18 49.5
24	11	9 0 14	18 38.6	24	11	19 55	18 42.2
24	9	0 38	18 32.6	24	11	20 3	18 41.7
24	9	1 29	18 36.9	24	9½	20 40	18 38.2
24	9	1 49	18 42.4	24	10	21 53	18 46.8
24	11½	1 58	18 36.5	24	9	22 3	18 48.6
24	11	2 7	18 36.5	24	12	23 8	18 47.8
24	10	2 25	18 36.7	24	9	24 2	18 47.5
24	9	2 37	18 35.3	24	11	24 16	18 34.4
24	11½	3 26	18 48.5	24	10½	24 17	18 38.0
24	10½	4 37	18 43.0	24	9	24 48	18 49.1
24	10	4 41	18 33.2	24	12	25 35	18 35.2
24	10	4 41	18 28.7	24	10½	26 1	18 38.0
24	10	5 46	18 40.0*	24	11	26 2	18 33.2
24	10½	6 16	18 39.2*	24	11	26 15	18 33.8
24	9	7 54	18 39.2*	24	12	27 10	18 48.0‡
24	12	8 4	18 43.8	24	11	27 13	18 37.2
24	10½	8 4	18 48.4	24	9	27 31	18 44.3
24	8½	9 9 33	+18 31.4	24	10	9 28 42	+18 45.3

* (4). † *f.* of double. ‡ Double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
24	11	9 28 53	+18 48.6	24	11	9 32 46	+18 31.3
24	10	29 57	18 32.7	24	10½	33 13	18 36.0
24	8	30 24	18 28.1	24	8½	34 13	18 44.2
24	10	30 50	18 44.2	24	10½	34 36	18 34.3
24	10	30 54	18 37.3	24	10½	34 43	18 36.6
24	9	32 3	18 36.4	24	10½	34 44	18 38.6
24	10½	32 41	18 39.2	24	10½	9 34 45	+18 35.1
24	11	9 32 44	+18 39.8				

APPROXIMATE MEAN PLACES, FOR JANUARY 1, 1850,

OF

1,370 STARS NEAR THE ECLIPTIC,

OBSERVED IN MARCH, 1852, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
12	11	6 58 38	+18 33.7	12	10½	7 2 57	+18 49.6
12	11	59 19	18 48.2	10	11½	2 59	18 52.9
12	10½	6 59 39	18 30.9	10	10½	3 7	18 53.5
12	9	7 0 40	18 47.1	12	11	3 25	18 32.1
12	11	0 43	18 44.8	10	11½	3 37	18 52.5
12	10½	1 41	18 49.1	12	10½	3 37	18 44.1
12	12	1 46	18 44.9	12	11½	3 53	18 48.1
12	11	1 47	18 47.9	12	11½	4 9	18 41.6
12	11	2 22	18 30.7	10	11	4 15	19 3.7
10	12	7 2 46	+18 52.8	12	11	7 4 21	+18 36.7

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
12	11	7 4 57	+18 38.7	12	12	7 12 0	+18 45.0
10	10	5 2	19 11.9	10	9	12 5	19 12.6
12	11½	5 13	18 48.4	10	10	12 19	19 12.6
10	11½	5 16	19 4.6	10	11½	12 53	19 12.0
12	11	5 16	18 47.2	12	11	12 56	18 31.2
12	10½	5 24	18 44.6	12	11	13 0	18 46.7
10	10½	5 29	18 51.1	12	10½	13 5	18 31.8
10	10	5 36	18 52.6	12	11	13 28	18 35.2
10	10	6 24	18 56.4	10	10½	13 34	19 3.7
12	10	6 30	18 39.7*	10	11½	13 34	18 53.3
10	10½	6 48	19 4.8	12	9	13 46	18 36.3
12	10	6 50	18 49.0	10	11½	14 6	19 3.1‡
12	10	6 55	18 50.1	12	11	14 12	18 44.9
10	11	8 6	18 53.7	12	10	14 20	18 45.5
10	11	8 25	18 54.7	10	10	14 26	18 53.8
10	10	8 33	18 57.1	12	10	15 5	18 48.3
12	9	8 33	18 37.3	10	9½	15 40	19 0.9*
12	11	8 36	18 42.5*	10	10	16 12	18 59.0
12	10	8 43	18 42.2	10	12	16 18	19 4.7
12	11	8 56	18 39.1	12	10½	16 23	18 35.8
10	11½	8 57	18 55.9	12	12	16 26	18 37.8
12	11	9 5	18 37.5	12	11	16 30	18 47.7
10	11	9 7	18 57.8	12	11	16 36	18 42.5
10	11	9 38	18 55.9	12	12	17 27	18 34.8
10	11½	9 53	18 51.1	12	10	17 38	18 35.1
12	10	9 54	18 31.0	8	10	18 19	22 2.6
10	12½	10 32	18 51.3	8	10½	18 27	22 0.3*
10	10	10 47	18 53.2	10	11	18 28	19 6.3
12	11	10 50	18 48.7	12	12	18 33	18 41.6§
10	12½	11 15	18 54.8	12	11	18 44	18 31.8
10	12	11 22	18 56.4	12	10	18 46	18 36.8
12	11	11 22	18 41.9*	8	10½	18 59	22 5.5†
10	11½	11 24	18 51.1	10	10	19 40	19 11.7
12	8	11 39	18 47.4	12	12	19 43	18 32.7
12	11	7 11 45	+18 44.1†	12	11½	7 20 4	+18 35.0

* (4). † L. of double. ‡ Double. § *f.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
12	11	7 20 13	+18 34.2*	8	9½	7 26 26	+22 8.3
12	10	20 23	18 38.3	12	11	26 27	18 47.9
10	10	20 31	18 50.5	12	11	26 33	18 44.6
12	9½	20 37	18 35.1	8	9½	26 50	21 57.5
8	10½	21 0	22 8.0	10	10½	27 6	18 59.5‡
12	10	21 5	18 35.1	10	9½	27 26	18 51.6
8	11	21 28	22 8.2	8	11	27 27	22 7.9
10	11	21 53	18 51.2	8	10	27 30	22 9.9
8	10	21 59	21 54.1	12	9	27 30	18 34.9
10	10	22 24	18 51.9	12	10½	27 33	18 38.3
12	10	22 38	18 38.7	12	9	27 42	18 42.9
8	9	22 45	21 58.6	12	9½	28 11	18 41.9
10	12	22 56	18 54.1	10	9	28 30	18 51.2
12	10½	22 56	18 39.9	8	11	28 38	22 9.4
8	9½	23 1	21 58.1	8	11	28 44	22 5.9
10	10½	23 3	18 54.9	8	9	28 51	22 2.6‡
8	10	23 29	21 51.8	10	12	29 8	18 52.6
12	12	23 33	18 39.1	10	9½	29 16	18 55.6
8	11	23 44	22 3.1	10	12	29 24	18 52.9
10	12½	23 51	19 7.3	12	11	29 31	18 36.8
10	10½	24 3	19 3.7	12	10	29 46	18 44.3
10	11	24 7	19 9.8	10	12	30 8	18 53.5:
8	11	24 19	22 6.6	12	11½	30 10	18 44.5
8	11½	24 27	22 8.5	10	12	30 15	18 52.0
12	10½	24 32	18 36.6	12	11	30 21	18 42.4
8	11½	24 41	22 5.7	10	12	30 59	19 8.2
8	11½	24 46	22 1.6	8	11	31 14	22 8.4§
12	10½	25 4	18 45.5	10	11½	31 31	18 57.2
10	9½	25 12	19 5.8	12	9½	31 34	18 42.6
10	10½	25 19	19 4.5†	10	12	31 42	18 58.9
8	8½	25 30	21 56.8	10	12	31 50	18 57.6
8	9½	26 0	22 11.2	12	10	31 53	18 48.8
12	10	26 0	18 43.7	12	10½	32 6	18 41.8
10	9½	26 20	18 53.4	10	11	32 21	18 55.3
12	11	7 26 21	+18 46.2	10	12	7 32 49	+18 51.7

* N. *p.* of double. † S. *p.* of double. ‡ (4). § L. of double.

Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′
8	11½	7 32 56	+21 53.4
12	10	33 1	18 37.2
8	10½	33 12	21 59.9
8	10½	33 14	21 56.5
8	10	33 14	21 53.1
8	9½	33 52	21 52.0
12	11	33 54	18 37.0
12	11½	33 55	18 31.4
12	12	34 26	18 32.7
12	11	34 31	18 32.8
10	11½	34 34	19 8.6
12	12	34 54	18 36.4
12	11	35 3	18 52.3
8	9	35 14	22 4.1
8	9½	35 21	22 11.1
8	10	35 23	22 7.8:
8	11	35 35	22 4.6*
12	8	35 44	18 32.3
10	9½	35 54	19 9.6::
12	10½	35 58	18 38.7
12	9½	36 4	18 33.5
12	11½	36 7	18 31.1†
10	9	36 32	19 2.4‡
10	12½	36 48	19 7.9
10	9	36 53	19 1.1‡
12	11	37 8	18 50.3
12	11	37 16	18 46.4
8	12	37 48	21 53.1
8	12½	37 54	21 53.1
10	11½	38 2	19 10.0
8	9½	38 5	21 53.1
12	11	38 6	18 32.7
10	10	38 11	19 1.3
12	11½	38 20	18 37 9§
8	9	7 38 26	+21 54.5

Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′
8	11	7 38 54	+21 56.2
12	11	39 21	18 32.0
12	10	39 27	18 42.3
12	10	39 28	18 31.7
10	12	39 39	19 7.1
10	11	39 39	19 7.3
8	10	39 46	21 56.0
10	10½	40 30	19 4.3
10	12	40 47	18 56.5
8	10½	40 58	21 56.6
8	10½	41 6	21 58.2
10	10½	41 8	19 2.0‡
12	10½	41 21	18 37.2
12	9½	41 30	18 36.2
8	9	41 31	22 4.2
12	11	42 32	18 44.0
8	9½	42 54	21 54.7
10	11½	42 59	18 55.2
8	9	43 4	21 58.2
10	11	43 10	18 59.3‡
8	10½	43 13	22 1.7
12	10½	43 14	18 42.8‡
8	9	43 20	21 54.4
12	10	43 22	18 46.0
8	10	43 47	21 50.1
12	11½	43 53	18 47.9
10	12½	44 39	19 3.2
10	12	44 41	19 3.0
8	10	44 44	21 54.5
10	12½	44 51	19 3.5
10	12½	45 0	19 4.8
12	11	45 3	18 34.4
12	9½	45 7	18 38.5
12	12½	45 15	18 31.7
12	12	7 45 18	+18 33.9

* N. *f.* of double. † *p.* of double. ‡ (4). § N. *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
10	11	7 45 19	+18 57.8	12	12	7 52 44	+18 38.5
8	10½	45 24	21 53.0	10	11	53 26	18 51.5
8	10½	45 44	22 6.4	8	11	53 32	22 1.1‡
10	12	46 17	18 52.8	12	10	53 32	18 46.0
10	12	46 20	18 53.7	10	11½	53 40	18 53.0
8	10½	46 23	21 57.0	8	11	53 58	21 53.6
10	12	46 24	18 52.6	12	12	54 5	18 49.9
12	11½	46 34	18 50.1	12	12	54 12	18 47.8
12	11	47 5	18 40.5	10	9½	54 17	19 8.4:
8	11	47 9	22 0.3	10	10	54 24	18 53.5
10	10	47 16	18 55.2	12	9½	54 30	18 45.2
8	9½	47 31	21 54.9*	12	10	54 39	18 34.7
12	11	47 38	18 42.2	10	10	54 55	18 51.5
10	10	47 39	18 58.6	12	9	55 4	18 47.2
8	11	47 57	22 7.1	8	10½	55 42	22 2.8‡
12	10	48 0	18 38.4	12	9	55 44	18 31.6
10	11	48 14	18 50.9	8	10½	55 48	22 0.9
8	10	49 3	22 7.1	12	11½	55 52	18 31.8
10	11	49 6	18 55.1	10	10	55 55	18 55.9
8	10	49 35	22 0.3	12	11	56 3	18 42.1
10	11½	49 52	19 8.3	8	10	56 10	21 58.8
10	11½	50 18	18 55.0	10	10	56 10	19 2.4
12	11	50 24	18 30.2	10	10	56 10	18 55.0
10	9½	50 38	18 56.7	12	10½	56 23	18 46.7
10	10½	50 46	18 57.4	12	11½	56 27	18 47.2
10 12	9½	50 52	18 49.3	8	10	56 32	22 7.6
10	10½	50 59	18 49.0	10	9	57 18	19 3.0
8	9	51 24	21 55.9	12	11½	57 22	18 32.3§
8	10½	51 34	21 53.5	8	11	57 52	22 9.7†
8	9	51 51	21 58.4	12	12	57 56	18 32.8
10	12	52 4	19 7.2	12	10	58 2	18 37.3
10	11	52 15	18 58.1	8	11½	58 5	22 8.2
12	10	52 22	18 38.1	8	9	58 8	22 3.0‡
12	11½	52 25	18 42.4†	12	9½	58 9	18 49.1
10	12	7 52 31	+19 5.7	8	12	7 58 14	+22 8.8

* N. *f.* of double. † L. of double. ‡ (4) § N. *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
8	10	7 58 22	+22 8.7	10	10½	8 4 9	+18 58.6
12	10½	59 1	18 40.6	10	10	4 33	19 5.9
12	12	59 7	18 32.8	8	9	4 34	22 3.5
12	11	59 9	18 35.9	8	9	4 47	22 6.0
12	10½	59 29	18 34.4	8	10	4 47	22 7.9†
10	12	59 37	18 58.9	12	10½	4 48	18 35.9
10	11½	59 42	18 53.8	12	12	4 50	18 38.5
10	12½	7 59 55	18 56.6	10	10	5 5	18 57.4
8	9½	8 0 6	22 11.0	12	11	5 9	18 36.2
8	9½	0 31	22 13.1	8	8½	5 14	22 7.0
12	10	0 35	18 34.0	12	11	5 54	18 34.5
12	10	0 43	18 36.6	8	9½	6 2	21 52.6
12	10½	0 44	18 35.1	8	10½	6 19	21 59.8
8	10	0 51	22 10.8	10	10	6 25	19 3.3
10	9½	0 59	19 9.6	10	11½	6 27	19 1.6
10	10	1 7	19 7.5	10	9½	6 37	18 57.7
12	10	1 22	18 36.0	10	11	6 40	18 51.6
12	10½	1 37	18 52.1	12	9	6 58	18 36.1
10	11	1 43	18 53.5	12	11½	6 58	18 32.5
8	10	2 15	22 2.5*	10	10	7 36	18 51.9
8	12½	2 17	22 10.7	12	9½	7 44	18 35.1
12	10	2 21	18 32.5	12	11½	7 49	18 49.3
10 12	10	2 24	18 49.3	12	10½	7 50	18 34.4
8	11½	2 28	22 10.8	12	10½	7 52	18 49.6
10	11½	2 30	18 55.0:	8	11	7 58	22 4.8
8	10	3 9	22 4.7	8	11½	7 59	22 7.1
12	12	3 24	18 37.9	8	11	8 4	22 9.1
10	10	3 26	18 53.0	10	9½	8 10	19 4.8
8	11½	3 31	22 8.3	10	12	8 19	19 6.8
10	10½	3 34	18 54.7	10	9½	8 30	19 6.3
12	10½	3 40	18 44.1	8	9	8 31	22 6.4
12	10½	3 40	18 48.7	10	12	8 44	19 4.5
8	11	3 50	21 56.3	12	11½	8 45	18 49.7
8	11	3 52	21 58.6	8	11½	9 7	22 8.4
12	10	8 3 58	+18 37.1	8	10½	8 9 21	+22 3.0

* (4). † Double.

Days. Obs.	Mag.	α	δ	Days. Obs.	Mag.	α	δ
		h. m. s.	° ′			h. m. s.	° ′
12	12	8 9 40	+18 32.9	10	11½	8 15 40	+19 9.1
8	8½	9 58	22 3.3	12	12½	15 49	18 46.6
12	10	10 3	18 32.2	12	10	16 17	18 34.1
10	12	10 7	19 5.3	8	10	16 39	22 10.7
10	11	10 23	19 4.1	10	11	16 58	19 2.1
10	12	10 33	19 6.5	12	9	17 4	18 48.2
10	9	10 51	18 52.2	12	11	17 16	18 45.3‡
10	10	10 53	19 4.8	10	11½	17 19	19 7.9
12	11	11 0	18 46.6	8	12	17 25	22 10.3
8	10	11 14	21 54.4	12	12	17 25	18 45.2
12	11	11 20	18 45.1	10	10½	17 29	18 58.9*
8	11	11 32	21 57.4	8	12	17 33	22 6.8
8	11	11 34	21 59.5	10	12	17 33	19 6.4
8	9	11 38	21 55.1	12	12	17 37	18 43.5
12	9½	11 51	18 31.1	8	9½	17 55	21 55.5
10	12	12 7	18 54.5	8	10½	18 8	21 56.8
10	12	12 15	18 54.4	10	9	18 12	19 2.0
10	12	12 20	18 54.3	8	10½	18 22	21 57.6
12	11	12 31	18 39.4	12	10	18 51	18 41.9
8	10	12 38	21 52.5	10	11½	19 2	18 56.9†
8	10	12 45	21 56.7	12	10	19 11	18 33.9
12	10½	12 49	18 39.6*	12	11	19 17	18 42.9†
8	11	12 54	21 59.3	8	11	19 34	21 59.4
10	11½	13 10	19 9.1	8	11½	19 36	22 10.2
10	12	13 12	19 6.3†	8	11½	19 43	21 59.7
12	10½	13 32	18 41.7*	8	11	19 46	22 10.5
10	11½	13 57	18 53.2	10	12½	20 14	18 55.1§
8	10	14 11	21 57.5:	10	12	20 22	18 56.5‖
10	9	14 20	19 11.6	12	11	21 20	18 47.6
8	11	14 21	22 10.5	8	11	21 21	21 55.1
10	10	14 30	19 8.0	12	12	21 22	18 49.6
12	11	14 36	18 35.8	8	10	21 28	22 0.3
10	12	15 3	19 10.0	12	10	21 34	18 49.0
10	10	15 8	19 8.2	8	10½	21 36	21 58.1
8	9	8 15 9	+22 4.8	8	12	8 21 46	+21 57.7

* (4). † L. of double. ‡ Double. § *p.* of double. ‖ *f.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
10	10	8 21 52	+19 9.7::*	8	12	8 28 0	+22 5.9
12	11½	21 56	18 48.4	10	11	28 23	18 56.7
10	11	22 11	19 8.0	10	10	28 35	18 56.3
10	9½	22 19	18 53.3	10	11	28 37	18 59.1
12	9½	22 29	18 37.1	12	11	28 45	18 42.9
12	10	22 39	18 39.2	8	10	28 46	22 8.3
12	12	22 46	18 35.4	12	9	29 9	18 42.0†
12	10½	22 49	18 30.9	10	12	29 18	18 59.6†
8	8½	23 14	22 12.1	8	11½	29 19	22 0.2
8	12	23 41	22 6.9	8	11½	29 19	21 58.0
8	12	23 42	22 8.0	12	11½	29 29	18 41.6†
10	10	23 48	18 59.2	12	11½	29 30	18 44.6
10	9	23 50	19 9.7	8	10	29 35	21 59.3
10	11	23 55	19 7.9	12	11	29 35	18 48.0
12	12	24 10	18 33.7	8	10	29 56	21 56.6
12	11½	24 12	18 32.4	8	10½	30 27	21 56.0
8	10	24 13	22 4.9	10	9½	30 33	18 58.0
8	12	24 24	22 5.0:	12	9½	30 38	18 42.0
12	12½	24 26	18 32.9	8	11	30 47	21 58.4
12	11	25 2	18 47.5	8	9	30 49	21 50.6
10	9	25 18	18 51.7	12	9½	30 56	18 44.7
10	10	25 23	18 57.7	10	8	31 9	19 4.7
12	11	25 25	18 46.5	8	9	31 38	22 4.1
8	10½	26 6	21 54.3	8	11½	31 54	22 5.5
10	11½	26 7	18 55.4	8	12	32 7	22 6.3
8	9	26 8	22 0.3†	12	11	32 15	18 44.5
10	12	26 8	18 56.2	8	9	32 17	22 5.4
8	10	26 23	21 54.2	12	11½	32 40	18 45.8
10	10	26 32	19 1.3	12	11½	32 50	18 39.9
12	10½	26 32	18 43.7	10	9½	32 58	19 1.8
12	11	26 36	18 45.5	8	11½	34 1	21 59.8
12	11	26 37	18 44.3	10	9½	34 4	18 55.3
12	12	27 3	18 34.7	8	11	34 9	22 0.5
12	9	27 22	18 39.8	10	11	34 40	19 1.7
10	9	8 27 28	+18 58.9	8	11	8 34 42	+22 0.9†

* L. of double.

† (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
10	10	8 34 46	+19 5.2	10	10	8 41 29	+18 55.1
10	11	34 53	19 2.4*	10	9½	41 35	18 56.6
12	9½	34 54	18 39.3	10	10	42 53	18 57.3
12	10	35 2	18 47.2	8	12	42 55	22 8.5
10	10½	35 31	19 2.2*	8	12	43 4	22 5.9
10	9½	35 38	19 2.3*	10	9	43 10	19 2.4*
8	12	36 4	21 55.2	10	10½	43 10	19 5.6
8	9½	36 21	21 52.2	10	10	43 23	19 4.2
8	9½	36 51	22 9.3	8	11	43 27	21 52.9
10	11	37 5	18 55.1	10	9½	44 16	19 8.1
8	9½	37 14	21 56.8	8	10	44 40	21 58.1
8	10	37 36	22 4.4	8	10	44 46	22 5.9
10	10	37 48	18 57.6	8	11	45 17	22 0.1
12	10½	37 50	18 34.9	8	9½	45 46	21 57.6
8	8½	37 53	22 10.7	8	11	45 46	21 50.6
10	10½	38 7	18 59.8	10	12	46 20	19 2.6
8	9	38 8	22 10.9	8	10½	47 2	22 6.2
12	11	38 18	18 39.6	10	10	47 6	18 54.6
12	10½	38 24	18 40.1	10	9½	47 7	18 58.3
10	11	38 28	18 56.9	10	10	47 21	18 57.0
10	12	38 34	18 55.1	8	11½	47 31	22 7.4
12	10½	38 37	18 32.4	10	9	47 35	19 5.2
8	10	38 46	21 52.9	8	11½	48 13	22 14.3
8	10	39 0	21 55.5	10	9½	48 40	19 9.5
10	9	39 1	18 56.5	10	9½	48 59	18 58.8*
10	11	39 42	19 6.7	8	11	49 34	22 3.2
10	10	39 44	19 4.5	8	11	49 37	21 53.3
10	11	40 5	18 54.7	8	11	50 1	22 8.5
12	10½	40 21	18 36.2	10	9	50 14	19 9.1†
8	10	40 26	21 54.3	10	11½	51 5	19 9.6
12	10	40 26	18 46.6	8	11	51 8	22 6.0
8	10½	40 27	22 0.7	8	11½	51 12	22 5.9
8	10	40 30	21 56.7	10	11½	51 13	19 5.7
12	10½	40 33	18 37.2:	10	9½	51 16	19 8.6
10 12	9½	8 40 42	+18 48.2	10	9½	8 51 25	+19 5.8

* (4). † *f.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
8	11	8 52 16	+21 56.1	12	12½	8 59 16	+19 52.6
10	12	52 21	18 51.6	12	12½	59 18	19 55.2
8	11	52 30	21 59.4	8	10½	59 19	21 59.3
8	10½	52 35	22 6.0	19	11½	59 20	12 30.7
10	12	52 57	18 52.7	8	9½	59 30	21 54.9
10	12½	53 1	18 52.1	10	12	59 46	18 53.4
8	12	53 32	21 53.8	10	12	8 59 59	18 56.6
10	12	53 56	18 51.0	19	12	9 0 1	12 14.4
10	11	53 59	19 3.3	10	10	0 3	19 7.9
10	11½	54 10	19 2.0	8	12	0 14	22 10.0
8	10	54 21	22 8.5	19	11	0 17	12 11.8
10	12	54 34	18 53.2	19	11½	0 18	12 17.4
12	11	54 50	20 12.6	12	10	0 38	19 59.0
8	12	55 0	21 53.8	10	11	0 42	18 57.9
10	10	55 8	19 6.8	12	10	0 46	19 56.6
10	11	55 10	18 51.8	12	11	1 2	20 3.7
10	11	55 22	18 59.2	10	10½	1 4	19 2.0
10	11	55 31	18 58.7	19	11½	1 9	12 10.0
12	11	55 52	20 0.6*	12	10	1 19	19 56.4
8	10	56 8	22 11.4	12	11	1 23	20 0.5
8	11	56 11	22 7.9	8	10½	1 30	21 55.8
10	10½	57 5	18 58.4	19	11	1 32	12 9.8
10	10½	57 11	18 56.8	8	10½	1 51	21 56.1
10	9½	57 20	18 57.2	8	12	2 7	21 53.2
12	11	57 22	19 57.9	10	11½	2 16	19 7.6
8	11½	57 28	22 6.3	12	10	2 28	19 56.2
12	10	57 46	19 59.9	10	12	2 30	19 4.5
8	10½	58 14	21 58.8	10	12	2 44	18 56.3
19	10	58 19	12 12.0	10	9	2 50	19 10.4
10	12	58 29	19 4.3	8	11	2 53	22 5.1
10	12	58 36	19 5.9	10	9	3 12	19 9.4
8	10	58 59	21 52.9	12	9½	3 18	20 10.7
19	11	59 8	12 25.9	8	11½	3 24	22 3.1
12	12½	59 11	19 59.8	12	9	3 35	20 7.7:
19	11	8 59 15	+12 27.6	8	11	9 3 49	+21 54.4

* S. *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
8	11½	9 3 49	+21 52.3	19	12½	9 7 55	+12 14.3
8	11½	3 54	22 1.9	12	10	7 57	20 2.8*
19	10½	4 5	12 26.9	19	11	8 38	12 13.0
10	11½	4 10	19 4.0	19	11	8 51	12 14.9
10	10	4 11	19 5.6	10	12½	8 54	18 52.7
19	11	4 13	12 21.8*	12	11	9 5	19 50.1
10	11	4 17	19 2.1*	19	9½	9 6	12 17.5
12	10	4 26	20 3.0	10	10	9 18	19 9.5
12	9½	4 28	20 10.0	19	11	9 26	12 13.6
12	11	4 33	20 7.3	12	9½	9 27	20 12.6
8	10½	4 42	22 6.4	19	10	9 27	12 20.1*
19	10½	5 6	12 17.0	19	11	9 41	12 13.6
10	9½	5 7	19 4.8	12	11	10 1	20 10.2
8	10	5 10	21 55.1	12	11½	10 23	20 10.0
10	12	5 32	18 53.9	19	10	10 26	12 10.1
10	11½	5 37	18 51.7	10	10	10 40	18 57.4‡
19	11	5 43	12 26.0	19	11½	10 48	12 30.5
12	10½	5 49	19 55.2	10	11	10 51	18 53.0
12	10	5 50	20 8.0	12	10½	10 51	20 10.2
19	9	6 0	12 16.3	12	10	10 59	20 7.7
12	11	6 3	20 2.6	10	11	11 11	18 59.2
12	10½	6 6	19 53.9	19	10	11 22	12 13.0
12	10	6 8	19 54.7	10	9	11 23	18 53.9
10	11½	6 18	18 51.5	12	11	12 7	19 52.6
19	9½	6 31	12 21.7	19	11	12 7	12 28.0
10	12	6 35	18 51.2	19	11	12 15	12 18.6
10	12	7 6	18 53.7	19	8	12 20	12 9.6
19	9	7 18	12 18.3	19	11	12 24	12 24.3§
10	11½	7 20	18 54.5	12	10	12 48	20 13.8
12	11	7 22	20 4.5	12	8	12 55	20 4.4
10	9½	7 41	18 54.0	10	12	13 2	19 3.7
12	10	7 45	20 2.8*	12	11	13 4	20 5.3
10	10½	7 48	18 58.9†	10	12½	13 16	19 5.6
10	9	7 49	18 52.7	10	10	13 21	19 6.2
19	12½	9 7 50	+12 13.9	12	12	9 13 28	+19 54.1

* (4). † First of three. ‡ N. *f.* of double. § S. *f.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
12	9½	9 14 1	+20 11.3	12	9½	9 19 4	+20 10.5
19	11	14 21	12 12.1	19	9½	19 12	12 15.9
19	11½	14 23	12 28.0	10	10	19 25	19 0.7
12	9½	14 24	20 9.0	12	11	19 30	20 3.3
19	12½	14 28	12 19.7	10	9½	19 39	18 49.5
12	10½	14 37	20 8.2	12	11½	20 3	20 6.3
19	11	14 44	12 18.0	12	12	20 7	20 7.1
12	11	14 51	20 2.7	12	11½	20 7	19 52.6
12	10	14 57	20 2.9	12	12	20 14	20 8.2
19	11½	15 18	12 25.8*	19	11	20 24	12 14.7
19	11½	15 46	12 23.2	19	12½	20 31	12 14.6
10	11	15 55	19 1.6†	19	12	20 45	12 14.0
10	10½	15 58	18 54.9	10	11½	20 53	18 56.3
19	11	15 59	12 23.3	10	11	21 5	18 56.6
19	10½	16 0	12 29.7	10	11½	21 8	18 56.4
19	10½	16 4	12 30.8	19	11½	21 11	12 30.6
19	11½	16 26	12 28.9	10	11½	21 13	18 53.1
12	10	16 27	19 56.2	19	12	21 35	12 28.9
12	12	16 38	19 56.6	19	10	21 37	12 30.5
12	10½	16 42	20 10.0	12	9½	21 55	20 14.5
10	10	16 43	18 55.8	12	11½	21 59	19 59.2
12	11	17 20	19 50.1	19	11	22 14	12 17.2
19	11	17 20	12 11.9	10	9	22 17	18 55.6
10	10	17 21	18 58.6	19	10½	22 21	12 25.7
10	9	17 24	18 53.6	10	9	22 25	18 55.2
19	9½	17 27	12 19.3	10	12	22 43	18 56.1
10	12	17 38	18 54.4‡	19	11½	22 47	12 23.2
12	9½	17 38	19 49.8	12	10	23 7	19 57.8
12	9½	17 40	19 52.7	10	12	23 17	19 0.0
19	11	17 42	12 12.7	19	9½	23 38	12 18.4
19	11	17 43	12 16.6	12	10	23 41	20 4.5
19		17 58	12 14.8	10	9	24 2	19 3.9
10	9	18 46	18 57.7	12	9½	24 11	19 55.5
19	11½	18 52	12 24.1	10	9½	24 34	19 2.8†
19	11	9 18 55	+12 23.6	10	11	9 24 39	+18 57.9

* N. *p.* of double. † (4). ‡ Double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
12	10	9 24 45	+20 9.5	10	12	9 31 0	+19 3.3
19	11	24 59	12 15.9	10	9	31 17	19 3.8
12	10	25 24	20 13.3	19	11	31 19	12 17.0
12	9½	25 50	19 56.7	12	10½	31 52	20 8.8
19	10½	25 50	12 17.0	12	11	31 58	20 10.8
12	10½	26 11	20 7.4	19	11½	32 0	12 28.1
19	9	26 16	12 11.7	10	11	32 19	18 55.0
19	11	27 2	12 14.5	10	9	32 25	19 4.3
19	9	27 18	12 23.6	19	12	32 32	12 16.4
12	11	27 21	19 55.8	10	10½	32 33	18 51.6
19	10½	27 25	12 13.7	19	11½	32 56	12 17.3
19	9	27 35	12 12.7	10	11	32 59	18 59.0
12	11½	27 43	20 4.9	19	8½	33 5	12 14.6
12	9	27 44	20 11.2	10	10	33 34	18 58.2:
12	9	27 56	20 6.7	10	10	33 39	19 2.8
10	11	28 5	18 51.7	19	9½	33 47	12 28.9
12	11½	28 13	12 28.7	19	9½	33 55	12 21.9
12	10½	28 21	19 54.4*	19	9	34 5	12 27.3
10	11½	28 31	18 51.5	10	8	34 7	18 54.2
10	10	28 49	19 8.4	19	11½	34 15	12 24.5
12	11	28 54	12 13.8	19	12	34 20	12 26.9
10	11½	29 3	19 6.7	19	12	34 39	12 26.2
12	9	29 17	20 4.5	19	9½	34 40	12 22.4
12	10½	29 24	20 6.9	19	10	35 18	12 23.3
19	12	29 31	12 18.5	19	10	35 39	12 19.7
12	10½	29 34	20 6.5	19	11½	36 10	12 19.5
12	10	29 36	19 58.8:	19	12	36 51	12 14.2‡
10	12	29 46	18 53.8:	19	11½	37 11	12 14.3
12	10	29 52	20 8.9	19	10	37 54	12 11.7
19	9½	30 6	12 24.4	19	10	40 8	12 27.5
19	10½	30 9	12 12.1	19	12	40 30	12 24.9
10	12	30 23	19 1.9†	19	12	40 38	12 12.2
10	12	30 23	19 7.6	19	12	41 33	12 28.9
12	12½	30 40	20 0.0	19		41 45	12 13.6
19	11	9 30 50	+12 29.1	19	10	9 41 52	+12 12.5

* N. *p.* of double. † (4). ‡ Double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	°
19	11½	9 42 16	+12 12.9	19	10	9 56 39	+12 19.2*
19	12	43 58	12 14.5	19	11½	57 2	12 24.9
19	10½	44 28	12 29.7	8	11	57 20	14 31.4
19	11½	45 22	12 26.6	8	9	57 34	14 28.9
19	9	45 22	12 21.2	19	11	58 0	12 27.0
19	9	45 34	12 21.7*	8	11	58 5	14 12.2
19	9½	46 44	12 28.4	19	11	58 20	12 22.7
19	9	46 55	12 33.3	8	10	58 23	14 13.7
19	10½	47 36	12 9.0	19	11	58 34	12 26.1
19	10½	47 39	12 12.6	8	11	58 38	14 28.2
19	12	48 30	12 14.8	19	10	58 46	12 19.6
19	12½	48 45	12 16.9	19	10	59 12	12 25.0
19	9	48 53	12 17.6	8	11½	9 59 22	14 24.2
19	12	48 55	12 13.9	19	10	10 0 13	12 14.1
19	9½	49 40	12 12.8	19	10	0 19	12 14.8
19	9½	49 50	12 28.8	19	10½	0 19	12 13.8
19	10	50 25	12 9.5	8	9	0 23	14 19.4
19	9	50 58	12 9.1	8	11	1 4	14 15.9
19	11	50 59	12 24.9	8	11	1 15	14 17.2
19	10	52 47	12 27.3	8	10	1 31	14 17.4
19	11½	53 5	12 15.6	8	11	1 39	14 19.4
19	12	53 12	12 15.3	8	9½	1 45	14 23.1
8	11½	53 31	14 17.4	8	10	1 57	14 18.2
8	12	53 36	14 27.7	8	11	2 56	14 12.4†
19	11½	53 51	12 15.8	8	9½	3 44	14 8.3
8	10	53 56	14 24.2	8	11	3 53	14 13.2
19	11½	54 5	12 12.8	19	10½	3 54	12 19.9
19	11	54 6	12 17.3	19	11½	4 17	12 19.8
8	11½	54 10	14 18.1	8	12	4 25	14 20.7
8	10½	54 38	14 20.4	8	11½	4 32	14 26.9
19	12	54 40	12 13.9	8	11½	5 8	14 12.8
19	12	54 48	12 11.8	19	12	5 44	12 16.6
19	10	55 10	12 32.9	19	10½	5 47	12 14.8
19	11	56 17	12 19.4	8	11½	6 38	14 28.7
19	11	9 56 25	+12 18.1	8	11½	10 6 45	+14 18.6*

* (4). † N. *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
8	11	10 7 5	+14 10.0	19	11	10 15 20	+12 11.6
19	11	7 12	12 25.7	19	9	15 53	12 10.3
19	12	7 22	12 25.2	19	9	16 21	12 12.4
19	12	7 41	12 18.3	19	12	16 22	12 14.2:
19	11½	7 47	12 18.5	10	9½	16 26	10 5.7
19	12	7 54	12 19.1	10	11½	16 39	9 57.3
19	10	8 16	12 16.6	10	12½	16 40	9 55.3
8	11	8 50	14 24.6	8	10	16 46	14 21.0
8	11½	9 4	14 28.9	8	12	16 49	14 18.3*
19	10½	9 20	12 21.9	19	11½	16 51	12 12.2
19	12	9 32	12 28.9	19	11½	17 34	12 20.0
19	9	10 3	12 24.6	19	10½	17 42	12 20.2*
8	9½	10 11	14 17.8*	19	11½	17 54	12 20.0*
19	12	10 27	12 13.0	10	10	18 5	10 5.7
8	11½	10 49	14 13.1	10	10½	18 20	10 6.3
19	11	10 51	12 9.1	10	11½	18 35	10 4.1
19	10½	11 18	12 29.4	10	11	18 59	9 53.3
19	11	12 8	12 26.0	10	11	19 6	9 59.0
19	10	12 35	12 26.6	19	12½	19 11	12 29.3
19	11½	12 36	12 23.3	8	10	19 14	14 10.5
8	11	12 42	14 10.8	8	11½	19 29	14 21.7
19	12	12 53	12 14.7	19	10	19 44	12 23.5
8	11½	13 45	14 18.1	19	10½	19 57	12 26.2
19	10	13 45	12 12.7	19	11½	20 0	12 24.1
19	10	13 49	12 24.1	10	10	20 22	10 5.3
19	10	13 49	12 9.7	8	10	20 44	14 26.8
10	12	13 58	10 10.0	10	9	21 18	10 2.4
10	12	14 3	10 7.9	8	10	21 47	14 11.6
8	12	14 17	14 28.2	8	12	22 4	14 27.0
10	11½	14 23	10 6.7	10	12	22 17	10 7.0
8	11	14 34	14 28.4	19	11	22 26	12 23.2
19	9	14 39	12 14.3	19	11	22 28	12 30.8
10	12	14 56	10 4.2	10	12	22 44	10 4.0
8	10½	15 13	14 24.8	10	12	22 45	10 8.9†
8	10½	10 15 20	+14 25.5	8	11½	10 22 50	+14 14.4

* (4). † L. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
8	9½	10 23 14	+14 23.2	10	10	10 31 5	+10 3.2
19	12	23 14	12 16.5	10	10½	31 10	10 2.4
10	12	23 34	10 7.3	10	11	31 37	9 59.7
19	10½	23 44	12 18.5	8	10	32 1	14 14.1
8	11	23 54	14 20.5	10	9½	33 2	10 2.8:
10	12	23 58	10 6.8	10	10	33 19	10 6.8
10	12	24 1	10 9.0	8	10	33 45	14 18.1*
19	11½	24 11	12 22.4	10	12	34 34	10 6.7
19	11½	24 23	12 24.1	10	10½	34 49	10 10.8
19	11	24 24	12 16.6	10	10	34 56	10 2.9
8	10	24 33	14 23.1	10	12	35 51	10 12.2
10	10	25 10	10 1.5*	10	10	36 40	10 1.7
10	11½	25 18	9 55.0	10	10	37 31	10 4.2:
8	9½	25 28	14 25.6	10	12	37 56	9 53.8
10	12	25 44	9 53.3	10	9½	38 56	9 54.0
19	11½	26 9	12 22.5*	10	9	39 22	10 2.5
19	11	26 12	12 20.3*	10	12	40 11	9 54.6
19	11	26 25	12 22.1	10	11	40 15	9 51.0
10	10	26 32	9 54.9	10	11	40 35	9 51.9
10	12	26 43	9 52.9	10	10½	40 51	9 54.5
8	9	27 5	14 28.3	10	11½	41 38	10 1.4
19	11	27 12	12 22.8	10	11½	42 50	10 2.0
8	9½	27 17	14 18.6	10	9½	43 2	9 59.6
10	12	27 30	10 8.2	10	12	45 38	9 53.8
10	12	27 48	10 6.0	10	12	46 0	9 58.5
19	9	28 9	12 24.3	20	10½	46 17	9 58.6*
10	11	28 23	10 3.9:	10	10½	46 45	10 4.8
10	10	28 38	10 1.1*	10	10½	47 16	9 55.6
8	11	28 49	14 23.2	10	10	48 14	10 4.1
10	10½	29 1	9 58.9	10	12	48 27	9 53.7
8	11	29 55	14 20.1*	10	12	48 35	9 56.3
10	10½	30 19	10 5.5	10	11	48 49	10 6.4
10	10	30 30	10 3.1	10	9	49 58	9 49.5
10	12	30 46	10 5.5	10	11½	50 15	9 59.6*
8	10½	10 31 3	+14 18.2*	10	10	10 50 46	+9 56.4

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
10	9½	10 50 55	+10 3.1*	10	9	11 1 32	+9 54.1
10	12	52 7	9 58.3	18	11	1 32	1 54.7
10	11½	52 12	9 56.0	19	11½	2 2	2 29.0
10	11	53 42	10 5.3	10	9½	2 20	9 55.1
10	11	53 50	9 56.4	18	10	2 59	2 6.9
10	11	53 51	9 57.5	19	10½	3 4	2 26.5
10	9½	54 37	10 9.4	19	11	3 6	2 15.8
10	9½	55 10	9 56.1	18	10½	3 15	1 58.9
10	12½	56 16	10 8.0	19	9½	3 16	2 19.8
10	12½	56 22	10 4.7	18	10	3 17	2 7.9
19	10	56 22	2 35.9	18	12	3 37	2 8.8
19	12	56 23	2 20.0	19	11½	4 6	2 15.7
19	10	56 40	2 31.5	19	11½	4 23	2 20.7
10	10½	57 21	9 52.6	19	11½	4 30	2 27.9
19	10½	57 38	2 29.6	18	10½	4 35	2 18.0
19	11	57 39	2 20.8	19	9	5 6	2 21.1:
19	10	57 46	2 15.2	18	10½	5 9	2 4.7
19	10	57 59	2 26.9	18	11½	5 35	2 5.9
10	9½	58 1	9 57.7	18	11½	5 55	2 2.5
10	9½	58 12	9 57.1	18	10½	6 5	1 56.9
19	9	58 22	2 29.5	18	11½	6 12	2 3.2
19	11	58 27	2 24.6	18	9	6 32	1 53.3
10	8½	58 30	10 12.0	18	11	6 37	1 52.1
19	11	58 42	2 27.2	19	11½	7 17	2 19.5
19	12	58 48	2 25.7	19	11½	7 25	2 15.3
10	9½	59 13	9 53.7	18	12	7 30	2 8.2
18	11	59 37	2 0.9	19	12	7 36	2 16.6
18	9½	10 59 48	2 3.0	18	10	7 50	2 6.0
19	11	11 0 23	2 20.3	18	11½	8 11	1 52.7
18	10	0 49	2 6.5	19	9	8 19	2 18.0
19	9½	0 49	2 21.1	19	9½	8 33	2 14.3
18	10½	0 59	1 54.4	18	11½	8 58	1 53.2
10	12	1 1	9 51.9	19	11	9 7	2 16.3
10	12	1 18	9 55.3	18	11½	9 13	1 55.9
10	10	11 1 31	+9 52.9	18	9	11 9 54	+1 50.3

* *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
19	12	11 10 2	+2 21.3	19	11	11 20 12	+2 22.5
18	10½	10 11	1 54.0	18	11½	20 21	2 6.3
19	12	10 19	2 33.8	19	12	20 49	2 31.0
18	11	10 54	2 7.3	19	12	21 0	2 22.7‡
18	10	11 19	2 2.0	18	10½	21 17	1 54.7:
19	11	11 24	2 27.5	19	12½	21 52	2 18.4
19	10½	11 25	2 31.3	19	12½	21 54	2 18.8
18	10½	11 39	2 6.4	19	11	22 53	2 32.4
19	10½	12 1	2 14.6	18	11	22 59	1 50.5
18	9	12 14	1 50.2	19	11	23 1	2 25.7
18	11	12 31	2 3.5	19	11	23 26	2 29.9
18	12	12 35	1 53.1	18	10½	23 33	1 53.8:
19	11	12 38	2 17.0	18	11	23 50	1 52.7
19	11	12 47	2 31.8	18	11	23 56	1 55.1
19	9	12 53	2 23.2:	18	11	24 8	2 5.5
19	11	13 9	2 33.0*	18	11	24 46	1 50.7
18	11	13 14	2 6.1	19	11	24 48	2 15.6
19	11	13 53	2 28.1	19	12	24 49	2 18.6
19	12	14 23	2 18.5	19	11	25 1	2 15.8
19	12	14 40	2 16.0	18	11½	25 13	1 50.9
19	12	14 44	2 17.8	19	9½	25 30	2 19.7
19	11½	15 47	2 20.4	19	10	26 7	2 16.0
19	11½	15 54	2 16.7	18	10½	26 17	1 55.3
19	11	16 26	2 19.5	18	11	26 55	2 2.7
18	11	16 27	1 54.3	18	11	26 55	2 6.6
18	12	16 40	1 57.0	19	9	27 3	2 19.5
18	11½	17 33	2 3.7	19	10	27 8	2 31.2
19	12½	17 34	2 14.8	19	10½	27 17	2 25.1‡
19	12	18 10	2 29.9	18	10½	27 43	1 59.1
19	11	18 24	2 28.3	19	10½	28 1	2 29.1
19	9½	18 34	2 32.0†	18	9	28 4	2 1.2‡
19	11½	18 37	2 29.0	18	11½	28 12	1 57.1
18	10	19 13	2 6.8	19	11½	28 56	2 32.6
19	10	19 20	2 19.8	18	12	29 4	1 58.6
19	10	11 19 38	+2 17.1	18	12	11 29 28	+2 4.9

* N. of double. † L. of double. ‡ (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
19	12	11 29 41	+2 26.2	19	9½	11 39 28	+2 20.6
19	11	29 53	2 19.0	19	11	39 35	2 14.9
19	10	30 19	2 15.7	18	10	39 47	2 11.0
19	11	30 23	2 18.0	18	11	40 9	2 3.6
19	11½	30 30	2 25.2	19	11	40 27	2 28.6
18	12	30 41	1 52.3	19	11	40 31	2 26.6
18	12	30 47	1 59.7	19	10½	40 41	2 17.3
19	11½	30 54	2 14.8	18	11½	41 35	2 5.2
19	9	31 43	2 15.3	18	11½	41 39	1 58.2
19	9	31 47	2 32.5	18	10½	42 6	1 58.3
18	11½	32 18	2 2.9	18	11	42 6	1 51.3
18	11	32 30	2 4.4	19	9½	42 8	2 24.7*
19	11½	32 51	2 17.8	19	9½	42 8	2 16.7
19	9	33 3	2 22.6	19	12½	42 10	2 17.9
19	10	33 40	2 26.2	18	9	42 46	1 50.4
18	12	33 49	2 6.7	18	11	43 27	1 55.8
18	11½	33 59	1 53.4	19	10	43 30	2 24.6
19	10	34 8	2 23.4	18	11½	44 29	1 54.5
18	9	34 23	2 4.8	18	11½	44 53	1 53.3
18	11	34 48	1 54.4	19	10½	45 28	2 28.4
19	10½	34 58	2 15.4	19	12	45 35	2 26.1
18	11½	35 24	2 4.5	18	11	45 46	2 9.2
18	10½	35 27	1 53.5	18	8	45 55	1 54.5
19	10	36 18	2 26.3	18	9	46 28	1 49.0
18	11½	36 37	2 6.6	19	9	47 2	2 20.7
18	11½	36 50	1 57.7	18	10½	47 14	1 50.9
19	12	37 14	2 18.4	18	11	47 33	1 48.5
19	11	37 26	2 27.5	19	12	47 34	2 20.3
18	11	37 48	2 3.1	19	12	47 39	2 17.7
18	11	37 52	2 9.1	18	10	47 47	1 57.7
19	10	38 28	2 31.6	19	12	47 56	2 17.1
19	10	38 37	2 30.2	19	11½	48 28	2 14.3
18	11½	38 43	1 50.0	18	10	48 51	1 56.4
18	11½	39 6	2 8.9	19	11½	49 44	2 25.9
19	9½	11 39 13	+2 26.3	18	12	11 49 56	+1 56.8

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
19	11	11 49 56	+2 16.8	18	11	12 0 18	+1 57.2
18	11	50 7	1 55.0	18	10½	0 19	1 50.1
19	12	50 7	2 15.6	18	12	1 31	1 51.6
19	11½	50 23	2 17.4	18	9½	2 8	1 47.2:
18	10½	50 24	1 59.8	18	11	2 9	1 56.1
19	10	50 43	2 15.2	18	10½	2 9	1 54.6
18	11	51 6	2 5.8	18	9½	2 23	2 1.8
19	9½	51 24	2 26.8	18	10	4 2	1 57.6
19	12	51 44	2 25.4	18	Neb.	5 12	2 8.1
19	12	51 59	2 31.2	18	10	5 17	2 9.4
18	11	52 21	2 4.0	18	9	5 45	1 59.8
18	9	52 56	2 9.0	18	11	6 21	2 1.2
18	11½	53 4	2 0.7	18	10	6 36	1 54.8
18	9	53 20	2 3.9	18	11	7 26	1 51.3
19	11	53 22	2 35.0	18	10½	7 30	1 51.4:
19	12	53 24	2 20.3	18	11	9 44	1 57.7
19	11½	53 31	2 21.2	18	9	9 54	1 55.2
19	11	54 3	2 13.9	18	11½	10 15	2 5.4
18	12	54 31	1 56.3	18	12	10 29	2 0.7
19	9½	54 55	2 27.5	18	11	11 7	1 56.1
18	11½	55 12	1 58.5	18	12	12 3	1 51.2
19	11½	55 17	2 16.8	18	11½	12 15	1 50.6
19	11	55 48	2 28.4	18	11	13 5	2 8.0
18	11	56 1	2 4.3	18	12	13 57	1 52.2
18	11	56 4	2 9.1	18	12	13 58	1 55.3
18	11½	56 13	1 58.1	18	12	14 0	2 1.7
18	11	56 19	2 3.6	18	9	14 22	1 52.7
19	12	56 28	2 20.1	18	10½	15 12	2 7.8
18	11	57 17	1 51.2	18	11	15 17	2 5.0
18	11	57 27	1 55.5	18	10½	15 49	1 54.0
18	12	57 51	2 7.7	18	11	16 51	2 4.5:
18	12	58 44	1 52.7	18	10	17 11	2 1.1*
18	12	59 43	2 2.1	18	9	17 14	2 6.4
18	11	59 53	2 8.3	18	9½	17 55	2 8.1
18	12	11 59 54	+2 6.3	18	11	12 18 54	+1 58.0

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
18	10	12 19 15	+1 54.3	18	9	12 23 36	+1 57.2
18	12½	19 52	2 8.5	18	10	25 20	1 54.5
18	12½	19 59	2 8.8	18	10½	26 1	1 51.2
18	12	20 34	1 53.2	18	12	26 51	1 53.7
18	10	21 32	2 0.5*	18	10½	27 32	1 56.4
18	10	21 41	2 8.8	18	10½	27 41	1 54.4
18	11	21 42	1 56.8:	18	10½	28 7	1 55.7
18	10½	22 46	1 52.8	18	10	29 19	1 50.9
18	12½	22 50	1 50.9	18	11	29 33	1 57.5
18	9½	12 23 32	+1 55.0	18	10½	12 29 58	+2 4.6

* (4).

APPROXIMATE MEAN PLACES FOR JANUARY 1, 1850,

OF

1,853 STARS NEAR THE ECLIPTIC,

OBSERVED IN APRIL, 1852, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
3	11½	9 16 9	+16 24.3	3	11½	9 21 25	+16 23.2
3	12	16 47	16 25.9	3	11	22 18	16 18.4
3	11	17 59	16 18.6	3	11	23 27	16 25.9
3	10	18 3	16 21.6	3	11½	25 42	16 11.9
3	10½	19 7	16 29.7	9	10	26 41	9 22.4
3	9	19 22	16 23.6	9	10	26 54	9 10.2
3	10	19 28	16 10.8	9	12	26 58	9 24.1
3	10½	19 40	16 13.0	3	11½	27 3	16 23.1
3	10½	20 23	16 28.3	3	11½	27 29	16 28.8
3	11	9 21 6	+16 26.1	3	11½	9 27 41	+16 21.1

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
9	10½	9 27 42	+9 13.0	10	11	9 35 52	+11 34.5
9	9	28 19	9 28.0	9	11	35 55	9 17.3
10	10	28 39	11 34.1	3	12	36 9	16 14.7
9	9½	28 51	9 24.9	9	11	36 37	9 26.5
10	9½	29 29	11 47.0	10	11	36 41	11 36.7
10	11	29 59	11 43.8*	10	11½	37 1	11 32.1
9	9½	30 7	9 13.9	3	9	37 13	16 21.7
9	9½	30 23	9 21.8	3	11	37 23	16 26.6
3	11	30 24	16 28.4	10	12	37 35	11 36.0
9	9½	30 33	9 30.9	10	10½	37 40	11 54.0
10	11	30 39	11 35.2	9	10½	37 46	9 21.3*
9	10	30 54	9 31.8	3	9½	38 8	16 21.5*
3	10½	30 54	16 14.6	10	9½	38 55	11 43.3
10	9½	30 56	11 48.5	3	9½	38 57	16 24.3
9	11½	31 51	9 13.8	10	10	38 57	11 38.0
10	12	31 51	11 37.6	9	11	39 18	9 14.8
3	10½	32 5	16 15.7	10	10½	39 27	11 41.1
9	8	32 12	9 24.9	9	12	39 37	9 15.4
9	10	32 22	9 17.3†	10	10	39 45	11 49.5
10	11	32 52	11 41.0	10	12	39 48	11 48.5
3	11	32 54	16 28.7	10	10½	39 49	11 47.6
10	12½	32 55	11 46.2	9	11	39 59	9 15.2
10	11	32 59	11 51.3	9	11½	40 18	9 31.0
10	12	33 0	11 47.4	9	11½	40 36	9 32.0
10	11	33 3	11 41.1	3	11	40 38	16 25.7
9	11	33 24	9 16.9	3	8½	40 43	16 15.6
3	10½	33 39	16 23.7	10	12	41 6	11 30.6
9	12½	33 50	9 30.4	10	12	41 24	11 35.2
10	12	34 18	11 36.5	10	11½	41 38	11 36.4
9	11	34 43	9 27.9	3	10½	41 41	16 25.2
9	12½	34 43	9 29.0	9	10½	41 44	9 13.6
10	12	34 43	11 50.1	9	11	41 48	9 26.3
10	12	34 46	11 52.1	3	10	41 53	16 12.0
10	11½	34 48	11 40.9	10	10½	41 56	11 44.6
10	11	9 35 27	+11 51.6	3	11	9 42 17	+16 22.3

* (4). † L. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
9	10	9 42 33	+9 32.8	9	9½	9 48 49	+9 27.8
9	10½	42 38	9 28.0	9	10½	48 50	9 19.6
9	11	43 15	9 15.4	3	11	49 19	16 21.6*
10	12	43 46	11 38.6	10	12	49 36	11 37.7
10	11	43 48	11 35.3	3	11	49 37	16 22.2
9	9½	43 54	9 17.4	3	10½	49 45	16 29.5
9	11	44 3	9 11.1	10	12	49 58	11 38.7
3	10½	44 11	16 13.3	9	9	50 15	9 13.7
10	12	44 24	11 41.8	9	11	50 28	9 21.7
10	11	44 29	11 38.1	10	11	50 38	11 41.3
9	12½	44 54	9 27.2	9	11	50 39	9 12.1
9	12	45 6	9 26.9	10	10	50 42	11 44.0
10	10	45 22	11 34.8	9	10	51 25	9 27.7
10	9½	45 22	11 51.4	3	11	51 27	16 25.0
10	8	45 25	11 40.3	10	10	51 33	11 41.8*
10	11	45 26	11 44.6	9	11	51 34	9 27.9
9	9	45 28	9 23.9*	10	10	51 37	11 42.5
9	11½	45 33	9 27.7	9	11	51 44	9 17.2
3	11	45 50	16 26.2	9	11	51 51	9 16.0
9	9½	46 0	9 27.0	3	9	51 55	16 30.2
9	11	46 8	9 20.1	3	11	52 1	16 17.1
10	9½	46 15	11 40.6	9	10	52 22	9 21.1
9	11	46 32	9 21.7	10	10	52 25	11 37.8
9	11	46 38	9 12.1	9	12	52 41	9 28.8
10	9½	46 42	11 48.8	9	12	53 5	9 27.6
3	9	46 46	16 15.0	10	12	53 6	11 48.4
9	11½	46 49	9 24.5	3	10½	53 17	16 28.9
9	11	46 55	9 24.7	10	10	53 32	11 35.7
10	11½	47 0	11 48.6	9	12	53 38	9 28.9
10	12	47 24	11 46.0†	10	10½	54 1	11 43.4
10	11½	48 10	11 43.8	10	10	54 4	11 38.9
10	12½	48 14	11 48.1	10	10	54 12	11 44.6
9	10½	48 34	9 27.6	10	10	54 16	11 53.6
9	10	48 44	9 21.8*	9	12½	54 32	9 19.9‡
10	11½	9 48 46	+11 45.1	9	12	9 54 37	+9 14.9

* (4). † L. of double. ‡ S. of double.

Days Obs.	Mag.	α.	δ.	Days Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
10	10½	9 54 39	+11 47.7	9	12	10 0 55	+9 18.0
3	10½	55 42	16 23.1	9	11½	1 21	9 14.4
9	12	55 47	9 29.6	9	12	1 29	9 17.7
9	12	55 49	9 17.3	3	9½	1 36	16 18.6*
9	9	56 8	9 29.1	6	12½	1 41	9 8.2
10	11½	56 14	11 37.0	9	12	2 37	9 14.0
6	11	56 16	9 6.6	10	10	2 38	11 38.1
9	11½	56 17	9 20.6	6	12	2 42	8 57.1
10	11	56 55	11 49.5	6	12	2 50	8 57.2
3	11	57 15	16 18.8*	10	11½	2 56	11 46.1
3	11½	57 21	16 17.2	6	11	3 45	8 53.3
9	10	57 21	9 25.0†	10	9½	3 53	11 38.6
10	10	57 28	11 52.9	10	11½	3 58	11 33.6
6	11	57 31	9 4.8	6	10½	4 2	8 55.4
10	10	57 38	11 39.0	10	11	4 14	11 37.0
9	10	57 53	9 14.0	6	10	4 46	8 58.4
9	12	58 1	9 19.0	10	11½	4 50	11 36.4
6	10	58 4	9 0.3*	6	12	4 52	8 57.5
9	9½	58 10	9 14.9	6	12	5 9	8 58.3
10	12	58 15	11 40.9‡	6	10½	5 17	9 7.3
6	11½	58 16	8 57.5	6	11	5 21	9 4.9
10	12½	58 36	11 37.2	9	12	5 24	9 14.4
9	8	58 37	9 17.3	6	9	5 44	9 9.1
6	10	58 49	9 5.8	10	9	6 7	11 50.0
10	9½	59 7	11 47.8	6	12	6 21	9 9.6
9	12½	59 8	9 25.2§	10	10	6 31	11 30.7
9	11	59 17	9 15.0	6	12½	6 44	9 7.4
6	11	59 36	8 59.2	10	11	6 48	11 33.6
10	9	9 59 50	11 33.9	6	12	6 58	9 6.2
9	9	10 0 4	9 14.3	10	11	7 14	11 53.8
3	10	0 9	16 28.2	6	11½	7 17	9 0.2
10	11½	0 15	11 40.8	10	12½	8 40	11 48.5
3	10	0 21	16 14.1	10	12	8 53	11 47.6
3	10	0 38	16 25.1	6	12	8 55	9 8.2
6	11½	10 0 44	+8 56.9	6	12	10 9 0	+ 8 58.2

* (4). † An. 11½ Mag. *p*. ‡ A. 12th Mag. *p*. § L. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
10	12½	10 9 0	+11 47.3	10	10½	10 17 53	+11 41.7
6	12	9 9	9 6.3	9	10	18 1	9 16.9
10	10½	9 44	11 41.2	6	10½	18 3	9 6.9
6	11½	9 53	8 53.0	9	10½	18 18	9 19.6
9	12	9 53	9 23.3	10	10	18 23	11 41.8
10	11	10 2	11 41.9	10	11½	18 26	11 46.1
10	10½	10 8	11 48.4	10	11	18 35	11 41.0
9	11½	10 9	9 28.1	10	10½	19 35	11 33.0
10	10	10 14	11 43.5	9	12	19 48	9 14.9
9	11	10 54	9 19.2	10	12	19 52	11 53.4†
6	9	11 15	9 3.4*	10	10½	21 6	11 48.0
6	11	11 25	9 6.6	6	11½	21 10	9 4.3
6	11	11 37	8 58.5	10	12½	21 46	11 45.0
10	11	11 38	11 37.6	10	11	21 51	11 45.1
6	9	12 1	8 59.6	10	11½	22 23	11 46.2
6	12	12 18	9 3.6	10	10½	23 7	11 39.0
10	10	12 29	11 52.9	12	12	23 19	6 47.6‡
9	12	12 42	9 28.8	12	12	23 37	6 37.1
10	10	13 36	11 41.4	12	12	23 50	6 49.8
10	11	13 37	11 50.3	10	11	24 4	11 50.4
6	11½	13 54	8 58.1	8	10½	24 5	5 0.2
10	9	13 56	11 43.0	15	12	24 28	4 50.3
10	11	14 0	11 50.0	12	10½	24 38	6 36.7
9	10	14 6	9 30.0	10	10½	24 43	11 37.2
6	11½	14 13	9 3.9*	6	10½	24 55	8 55.5
6	12	14 27	9 3.5	15	10½	24 59	4 49.6
6	12	14 38	9 3.4	10	12½	25 0	11 35.7
10	11	14 51	11 41.2	12	12½	25 3	6 46.4
6	11½	14 55	9 0.8	6	12	25 5	8 55.5
10	11	15 40	11 40.8	15	11	25 13	4 42.6
6	10½	16 27	9 7.1	8	10½	25 15	4 58.2
10	11	16 47	11 33.5	15	12	25 17	4 44.3
6	10½	16 57	9 7.7	12	11½	25 22	6 34.4
9	10½	17 2	9 31.6	10	11	25 23	11 35.0
10	11½	10 17 18	+11 38.4	12	12	10 25 34	+6 39.2

* (4). † Double. ‡ A small star *p*.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
12	12	10 25 35	+6 39.7	12	10	10 28 13	+6 36.2
8	9½	25 36	5 9.4	8	11	28 20	4 54.6
15	10	25 37	4 35.8	6	10½	28 28	9 0.7†
9	11	25 44	9 13.2	12	11½	28 33	6 49.6
15	11	25 46	4 36.8	12	11½	28 35	6 49.7
15	10	25 53	4 50.4	15	8	28 54	4 43.5
10	12½	25 58	11 34.6	9	11	28 56	9 21.3
6	12	26 7	9 4.3	9	12½	28 56	9 27.0
14	10½	26 16	5 36.5	14	12	28 59	5 36.7
16	11	26 21	5 10.4	16	9½	29 0	5 16.0
14	12	26 22	5 52.7	16	10	29 7	5 20.3
8	12	26 26	4 55.4	6	11	29 13	8 56.6
14	11½	26 29	5 39.8	10	11	29 17	11 48.0
8	9	26 31	4 53.0	12	12½	29 19	6 35.4
12	11½	26 33	6 32.9	16	10	29 21	5 14.8
15	11	26 37	4 37.9*	12	12	29 23	6 37.1
12	12	26 45	6 37.3	14	12	29 25	5 36.9
10	12	26 49	11 46.4	15	12	29 30	4 37.6
8	11	26 57	4 52.1	10	11	29 37	11 50.2‡
16	9	27 2	5 24.5	15	11½	29 37	4 38.1
10	11	27 10	11 39.6	14	12½	29 42	5 45.7
15	9½	27 12	4 35.6	8	9½	29 49	5 7.0
16	11	27 15	5 14.2	12	12	29 53	6 40.2
15	10½	27 24	4 37.1	6	12	29 54	9 14.3
10	10½	27 25	11 39.8	16	10½	29 57	5 29.0
16	11	27 29	5 22.2	8	12½	30 3	5 5.0
12	9	27 30	6 35.0	10	10	30 9	11 30.6:
12	10½	27 35	6 37.6	16	8½	30 13	5 13.3
8	10½	27 42	4 52.6	6 9	11½	30 15	9 13.1
15	11	27 42	4 31.6	9	10	30 24	9 25.0
12	12½	27 44	6 37.7	8	10½	30 30	5 2.8†
12	12	27 57	6 35.9	16	9	30 30	5 28.1
16	11	28 3	5 16.3	15	11	30 35	4 46.4
8	11	28 6	5 4.9	8 15	8½	30 41	4 53.2
8	10½	10 28 11	+5 4.8	14	11½	10 30 51	+5 46.2

* L. of double. † (4). ‡ Suspect to be double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
15	12	10 30 57	+4 33.7	6	12	10 33 30	+9 9.6
16	11	30 57	5 14.8	15	12	33 31	4 32.3
16	10½	31 0	5 20.1	6	12	33 36	9 8.6
10	11½	31 1	11 35.3	9	10½	33 43	9 30.9
10	10½	31 9	11 35.7	8	11	33 44	5 5.7
15	9½	31 10	4 38.5	6	12	33 49	9 9.3
15	8½	31 12	4 32.7	14	11½	33 51	5 44.0
12	10	31 13	6 40.3	14	11½	33 54	5 45.3
14	10	31 13	5 39.8	16	11	33 58	5 31.8
9	10½	31 20	9 31.7	14	11	33 59	5 31.9
8	10½	31 27	5 4.2	16	10½	33 59	5 28.2
14	10½	31 27	5 39.8	15	12	34 9	4 50.7
14	11	31 30	5 43.8	15	10	34 11	4 47.6
6	11½	31 51	8 57.6	14 16	10	34 12	5 34.3
8	11	31 59	5 4.2	9	10	34 19	9 26.4
14	11½	32 5	5 45.0	12	9½	34 30	6 50.6
10	11	32 6	11 40.8	16	11	34 35	5 14.0
14	12	32 14	5 32.5	15	10	34 36	4 33.2
8	10	32 15	5 8.0	10	11½	34 39	11 37.9
10	12½	32 15	11 48.8	10	11	34 40	11 47.8
14	9	32 15	5 35.4	8	10½	34 53	5 4.7
8	11	32 32	5 2.7*	16	9	34 57	5 33.2
8	10	32 32	4 54.9	9	10	35 8	9 35.3
15	9	32 35	4 50.1	15	10	35 17	4 47.5
12	10	32 48	6 40.5	12	9½	35 24	6 37.9
6	11	32 49	9 10.1	6	12	35 25	8 56.4
6	10½	32 50	9 9.2	14	12	35 25	5 37.9
16	10½	32 54	5 17.0	14	12	35 37	5 39.1
12	10½	32 59	6 37.1	15	11½	35 37	4 44.5
16	10½	33 0	5 15.1	8	7½	35 38	5 5.2
12	11	33 8	6 36.7	12	12	35 39	6 35.0
16	12	33 13	5 15.7	10	10½	35 46	11 33.1
14	12	33 16	5 45.9	8	8½	35 50	5 1.9
12	10½	33 18	6 38.9	10	11	35 50	11 39.7
10	11	10 33 21	+11 46.2	10	11	10 35 57	+11 39.7

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
9	11	10 36 3	+9 25.9	16	11	10 39 15	+5 18.
15	11	36 13	4 33.8	14	9	39 17	5 48.
12	10	36 22	6 47.6	10	10½	39 18	11 50.
6	11½	36 31	8 58.2	16	10	39 21	5 26.
12	9½	36 31	6 40.4	14	11	39 29	5 32.
14	12	36 35	5 35.2	15	11	39 34	4 35.
16	12	36 46	5 19.0	10	12	39 36	11 51.
14	12½	36 50	5 34.8	15	12½	39 44	4 35.0 †
15	12	36 51	4 37.7	8	12½	39 47	5 3.8
6	11½	36 55	9 2.7	8	12	39 47	5 8.7
10	12	37 10	11 46.3	16	10	39 52	5 28.1
14	11½	37 18	5 38.8	12	9	40 0	6 30.2
8	12	37 19	5 8.2	12	12	40 5	6 39.6
14	9½	37 21	5 35.7	6	10	40 6	9 8.9
14 16	9½	37 23	5 33.0	15	10½	40 11	4 44.0
16	12	37 29	5 24.1	10	11½	40 13	11 48.8
15	10	37 31	4 40.2	9	11	40 15	9 19.0
10	11	37 39	11 48.0:	9	11	40 15	9 10.7
8	12	37 42	4 55.6	16	10½	40 17	5 18.3
15	11½	37 42	4 44.6	15	10	40 22	4 47.7
12	11	38 2	6 41.7	10	10	40 31	11 53.8
8	12	38 9	4 56.7	14	10	40 35	5 45.7
16	10½	38 9	5 29.2	12	11½	40 40	6 38.1
12	12½	38 16	6 35.6	14	11	40 41	5 32.7
15	10	38 23	4 37.0	16	10½	40 53	5 28.8
15	11½	38 23	4 31.5	14	10½	40 59	5 33.3
12	12½	38 24	6 39.4	16	11	40 59	5 28.9
8	11½	38 26	4 58.6	14	10½	41 1	5 44.6
8	10	38 35	5 8.6	14	10½	41 4	5 42.3
10	11½	38 41	11 37.7	8	11	41 9	5 5.7
14	10½	38 48	5 43.2	9	11½	41 10	9 16.2
16	9	38 55	5 14.4	12	10½	41 10	6 34.1
15	11	39 4	4 32.0	8	11½	41 17	5 6.6
14	11½	39 8	5 36.5	10	11	41 17	11 30.4
14	10½	10 39 9	+5 42.8*	16	11	10 41 17	+5 26.9

* (4.)

† Double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
15	11	10 41 30	+4 38.4	10	12	10 44 23	+11 34.9
12	9	41 33	6 43.6*	15	7½	44 31	4 33.6
12	10	41 34	6 37.7	15	10½	44 33	4 50.0
8	9½	41 40	4 59.0	12	11	44 38	6 34.0
15	11	41 40	4 39.7	16	9	44 45	5 30.7
8	11	41 42	4 53.6	14	11	44 52	5 49.8
12	10	41 50	6 47.3†	14	12½	44 53	5 37.9
8	10½	41 51	4 53.2	12	11½	44 55	6 36.6
10	10½	41 57	11 47.0	8	9½	44 59	5 2.7
14	12	42 2	5 32.8	12	11	45 3	6 34.0
15	10½	42 4	4 40.3*	10	11	45 6	11 48.0
16	11	42 4	5 16.3	16	11	45 13	5 25.6
14	12	42 7	5 35.3‡	10	11½	45 14	11 49.1
16	11	42 9	5 16.2	10	11	45 17	11 46.4
14	9	42 13	5 37.8	16	10	45 17	5 16.6
9	11½	42 21	9 30.5	15	9½	45 25	4 46.4
8	9	42 34	5 6.7	15	9	45 28	4 40.3§
14	12½	42 36	5 34.8	16	11	45 35	5 16.7
12	9½	42 40	6 33.9	16	10½	45 36	5 17.5
16	8½	42 43	5 20.6	8	10½	45 38	5 3.0
16	11	42 46	5 12.7	10	11	45 59	11 48.7
10	10½	43 0	11 33.8	8 15	9½	46 0	4 48.9
14	11	43 2	5 33.4	15	11½	46 10	4 39.8
16	11	43 9	5 17.6	15	10½	46 11	4 37.5
8	12½	43 25	5 10.1	12	11	46 24	6 39.4
15	10	43 27	4 32.5	12	11	46 25	6 37.1
9	10	43 43	9 20.0	14	11½	46 36	5 35.2
12	10½	43 48	6 38.3	12	11½	46 37	6 46.3
10	12	43 56	11 35.5	16	10½	46 47	5 13.3
16	11½	43 57	5 13.3	16	10½	47 0	5 16.1
12	11½	44 5	6 51.2	8	10	47 1	5 10.8
12	11	44 6	6 49.6	8	9½	47 2	4 55.5
14	11	44 6	5 52.6	14	12	47 8	5 45.6
8	10½	44 11	4 54.6	10	11½	47 14	11 35.2
10	11	10 44 14	+11 35.3	14	9	10 47 20	+5 46.0

* (4). † L. of 3. ‡ S. f. of double. § Preceding a double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
10	11½	10 47 22	+11 35.3	8	10½	10 49 56	+5 2.3*
15	11	47 22	4 32.6	16	9	50 3	5 31.5
9	10	47 29	9 20.4*	12	12	50 10	6 50.0
10	11½	47 34	11 36.4†	12	11½	50 13	6 47.7
16	12	47 45	5 16.3	14	11½	50 14	5 51.0
14	11	47 46	5 37.0	15	9½	50 15	4 45.1
15	11	47 46	4 40.4	10	11½	50 20	11 36.1
14	11½	47 51	5 34.9	10	11	50 24	11 35.2
16	12	48 2	5 13.1	9	12	50 27	9 14.4
12	11½	48 4	6 47.8	16	11	50 27	5 27.5
12	12½	48 11	6 49.6	12	10½	50 38	6 48.8
8	10	48 13	4 57.1	16	9	50 38	5 21.5*
14	10	48 15	5 40.6	16	12	50 39	5 28.2
8	10	48 17	5 1.5	9	11	50 41	9 14.9
14	11½	48 17	5 45.6	14	10	50 45	5 37.8
8	10	48 20	5 6.6	16	11½	50 48	5 26.4
8	10½	48 21	5 6.2	8	9½	51 6	4 51.2
16	10	48 21	5 13.7	15	11	51 8	4 34.9
15	11	48 33	4 39.4	10	10½	51 11	11 33.4
10	11	49 6	11 46.2	9	11	51 14	9 31.1
9	10	49 8	9 29.5	15	10½	51 14	4 48.3
9	11	49 15	9 29.3	14	12	51 16	5 38.3
15	11½	49 16	4 37.2	14	12	51 17	5 43.6
12	11½	49 22	6 49.3	8	9½	51 20	4 54.4
16	10½	49 22	5 15.8	14	11	51 34	5 41.4
10	11	49 24	11 39.8	10	10½	51 38	11 51.9
10	11	49 24	11 36.6	15	10	51 39	4 46.4
16	11	49 24	5 16.2	15	10	51 47	4 44.7
14	12½	49 30	5 33.1	10	11½	51 48	11 48.4
12	9	49 33	6 50.2	16	11	51 49	5 14.2
12	11½	49 38	6 51.8	6	12½	51 54	8 59.3
6	12	49 41	8 57.7	9	12	52 1	9 28.9
14	12½	49 42	5 34.4	15	12	52 11	4 44.9
8	12½	49 45	5 8.6	6	12	52 12	8 54.2
15	11½	10 49 48	+4 32.6	9	12	10 52 13	+9 27.8

* (4). † S. of 2.

Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′
12	12	10 52 17	+6 37.2
16	10	52 25	5 14.3
6	12	52 27	8 54.3
8	9	52 30	5 9.5
14	11½	52 30	5 35.3
16	10½	52 35	5 19.0
8	11	52 36	5 6.5
10	12	52 39	11 51.8
16	10	52 40	5 16.6
10	12	52 43	11 49.9
16	12	52 59	5 16.2
14	12	53 0	5 33.1
8	10½	53 16	5 8.7
10	10½	53 26	11 35.4
9	11½	53 36	9 19.2
6	10½	53 41	8 59.9
14	12	53 42	5 44.8
9	12½	53 47	9 23.7
12	12	53 48	6 41.8
15	11½	53 49	4 45.1
15	12½	53 49	4 36.5
16	12½	53 51	5 16.1
10	12	53 58	11 36.7
14	10½	54 0	5 38.6
15	11	54 2	4 44.6
14	12	54 5	5 39.1
16	12	54 8	5 19.0
16	11½	54 10	5 25.9
16	10	54 28	5 15.9
8	9½	54 31	5 0.2*
15	11	54 34	4 37.8
16	10½	54 46	5 18.8
6	11½	54 49	8 59.3
14	9	54 56	5 38.4
9	11	10 55 1	+9 31.9

Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′
10	11	10 55 3	+11 46.6
10	10½	55 3	11 33.7
14	11½	55 8	5 45.0
14	11	55 15	5 48.2
16	10	55 15	5 16.4
8	11½	55 17	5 7.3
12	10½	55 20	6 35.8
15	11½	55 22	4 50.0
15	10	55 23	4 40.4
12	11	55 32	6 33.1
6 9	10½	55 35	9 10.8
16	11	55 38	5 18.9
16	11	55 41	5 13.5
6	12	55 51	9 0.2
15	11	55 56	4 49.2
14 16	9	55 58	5 30 5
15	10	56 1	4 44.1
14	11	56 12	5 45.7
10	11	56 17	11 38.0
8	10	56 18	5 7.2
6	12	56 21	9 2.7
10	10½	56 27	11 33.0
8 16	11	56 36	5 13.0
15	8½	56 37	4 49.4
6	12	56 46	9 1.9
8	10	56 47	5 6.2
6	12	56 52	9 1.1
15	11	57 3	4 53.6
16	9	57 6	5 16.0
16	12	57 10	5 18.3
14	11½	57 13	5 46.5
12	11½	57 42	6 33.5
15	9½	57 47	4 43.1
16	11	57 47	5 18.2
14	8½	10 57 49	+5 41.4

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
8	12	10 58 2	+5 8.1	15	12	11 1 12	+4 39.4
10	11	58 6	11 35.0	15	12	1 12	4 36.4
14	9	58 8	5 47.9	10	11	1 18	11 40.4
10	11	58 9	11 40.2	8	11	1 22	5 4.6
8 15	9½	58 19	4 52.7	14	10	1 27	5 50.6
8	10½	58 20	5 7.1	15	10	1 35	4 45.1
9	11	58 25	9 20.8	10	10½	1 36	11 35.2
15	10	58 26	4 38.4	14	12	1 52	5 51.2
14	10	58 30	5 46.9	9	10½	1 57	9 16.7
14	11	58 54	5 49.7	15	6	2 10	4 31.3
8	9½	58 59	5 13.2	14	12	2 31	5 35.5
12	11	59 0	6 43.8*	8	11	2 35	5 4.0
16	8	59 12	5 24.2	8	10	2 35	5 4.5
6	12	59 15	8 57.3	15	7	2 42	4 32.8‖
6	12	59 15	8 56.0	6	12	2 44	9 8.2
10	10	59 18	11 43.0†	15	9	2 45	4 40.1
12	12	59 19	6 36.6	6	12	2 51	9 10.4
8 16	9½	59 21	5 13.0	9	10	2 54	9 19.1
9	11	59 23	9 16.1	14	9	2 54	5 34.9
6	12	59 26	8 56.3	12	11	3 3	6 32.1
15	10	59 28	4 46.1	12	11	3 6	6 35.5
10	11	59 32	11 40.0	15	9	3 8	4 49.1
15	12	59 36	4 35.9‡	16	8½	3 29	5 24.7
14	9	59 47	5 40.0	12	10	3 37	6 46.4
16	11	59 47	5 31.0	14	11	3 50	5 46.7
15	9	10 59 57	4 31.8	8	10	3 51	5 3.6
8	11	11 0 10	4 55.9	8	9	3 53	4 52.9
12	12	0 10	6 44.3	12	10	4 2	6 37.9:
14	8	0 15	5 48.0	14	9	4 3	5 45.9
8	11	0 45	4 57.3	15	9	4 7	4 37.3
14	11	0 48	5 50.2	14	11	4 17	5 44.8
16	10	1 2	5 24.4	15	12½	4 23	4 34.4
16	11	1 5	5 28.4§	15	12	4 24	4 38.8
10	12	1 7	11 40.2	15	12	4 24	4 36.1
15	12	11 1 9	+4 32.7	8	10½	11 4 42	+4 52.2

* (4). † Beautiful double. ‡ N. *p.* of double. § L. of double. ‖ Small companion.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	°
12	10½	11 4 52	+6 54.1	16	11	11 8 58	+5 19.3
16	12	4 57	5 18.2	16	8½	9 0	5 29.3
15	10	5 2	4 34.9	15	9½	9 6	4 48.1
14	8½	5 5	5 42.3*	14	11½	9 7	5 33.1
14	9	5 7	5 46.4	15	9	9 10	4 46.4
14 16	8½	5 16	5 30.1	6	12	9 11	9 4.9
8	12	5 26	5 7.0	15	9½	9 19	4 35.7
8	10	5 50	5 7.8	12	12½	9 23	6 49.1
6	11½	6 3	9 5.9†	6	12	9 33	9 7.7
16	8½	6 5	5 30.5	8	10½	9 35	5 0.4*
6	12½	6 7	9 1.1	15	10	9 39	4 38.7
15	12	6 12	4 36.5	8	11	9 42	5 9.9
15	10	6 13	4 41.6	16	9	9 42	5 25.5
12	12	6 15	6 38.4	16	Neb.	9 46	5 22.7
16	10½	6 20	5 29.5	6	11	10 2	8 57.4
14	10	6 25	5 48.3	15	10	10 6	4 41.1‡
14	12	6 27	5 51.0	6	11	10 14	9 2.6
16	11	6 32	5 25.4	15	12½	10 15	4 47.9
14	10	6 44	5 50.6	6	11½	10 18	8 59.5
8	12	6 46	5 9.0	14	9	10 27	5 49.9
15	12	6 47	4 46.7	16	8½	10 39	5 19.7
16	10½	6 59	5 17.9	8	11	10 43	5 9.9
15	10	7 22	4 46.9	14	12	10 47	5 34.9
16	11	7 27	5 16.3	15	9	10 49	4 45.5
6	12	7 31	9 3.5	6	10	10 55	8 58.0
8	10	7 41	5 10.8	8	11½	11 12	5 8.9
14	11	7 51	5 39.1	14	10½	11 24	5 35.6
6	11	7 56	9 8.6	15	9	11 33	4 31.8
8	10½	7 56	4 59.5	14	10	11 36	5 49.8§
12	12	7 58	6 35.2	15	11½	11 37	4 47.8
16	8½	8 0	5 30.5	8	10	11 42	4 54.1
16	11	8 14	5 20.3*	12	11	11 43	6 30.6
8	10	8 27	5 8.9	14	9	11 49	5 37.9
14	12	8 30	5 50.5	16	9	11 55	5 21.4
6	11½	11 8 35	+8 59.7	6	11	11 12 3	+8 59.7

* (4). † A. 12th N. *p.* ‡ L. of double. § An. 11th S. *p.*

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
6	12	11 12 9	+8 59.5	6	9½	11 16 1	+9 10.7
16	9	12 10	5 17.5	6	11½	16 7	9 3.9
6	11	12 17	9 13.1	14	11	16 9	5 53.2
15	12	12 19	4 38.8	6	11	16 12	9 7.3
8	12	12 28	5 8.8	14	12	16 13	5 43.4
16	8	12 36	5 29.7	15	12	16 14	4 32.2:
15	12	12 47	4 50.8	8	11	16 18	5 7.5
15	11	12 51	4 42.7*	8	10½	16 26	4 56.4
8	10	12 56	5 12.9	15	11	16 33	4 32.4
14	12	12 57	5 41.4	16	12	17 14	5 19.2
8	10	13 10	5 11.0	16	9	17 21	5 25.0
15	11	13 10	4 39.8	15	9½	17 26	4 35.2
14	12	13 19	5 46.1:	6	12	17 27	8 59.5
6	12	13 25	9 3.7	6	12	17 27	8 56.8
6	12½	13 27	9 9.3	16	12½	17 34	5 29.2
8	11	13 33	4 52.7	6	10	17 41	8 55.5
12	11½	13 33	6 34.0	8	11	17 54	4 53.2
15	11	13 35	4 47.0	8	11½	17 55	4 58.4
15	11	13 39	4 47.2	8 15	9	18 7	4 49.5
16	9	13 44	5 30.0	14	10	18 16	5 43.7
6	12	14 2	8 59.5	14	11½	18 18	5 45.5
16	9½	14 5	5 34.3	14	10½	18 24	5 45.6
8	10	14 7	5 9.9	15	11	18 31	4 47.9
14	11	14 13	5 50.5	6	12	18 35	8 54.3
8	11½	14 21	5 10.4	15	11	18 35	4 50.3:
14	10	14 35	5 50.1	6	10	18 45	8 55.2
6	11	14 42	8 54.4	16	9	19 18	5 21.3*
14	10	14 44	5 44.7	8	12	19 27	4 58.6
16	12	15 9	5 22.9	14 16	9½	19 40	5 31.9
16	12	15 13	5 27.8	16	11½	19 42	5 24.6
8 15	11	15 31	4 49.1	14	12½	19 54	5 34.5
16	10½	15 36	5 18.0	15	10	19 56	4 48.1
15	12½	15 38	4 46.3	6	12½	19 57	9 9.0
15	12½	15 38	4 49.4	6	10½	20 20	9 6.6
14	11	11 15 54	+5 40.0	6	10	11 20 23	+9 10.8

* (4).

Days.Obs.	Mag.	α.	δ.	Days.Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
14	11½	11 20 34	+5 42.4	15	12	11 23 56	+4 42.0
14	11	20 38	5 32.1	6	11½	23 58	8 55.4
14	11	20 44	5 43 1	8	10	24 6	5 2.2
16	12	20 44	5 17.7	14	8½	24 11	5 49.1
14	8	20 54	5 50.0	15	8½	24 13	4 43.0
8	11	20 55	5 2.9*	16	9½	24 41	5 28.4
15	9½	20 55	4 37.0	8	10	24 47	4 58.4
15	8	20 57	4 39.9	16	10½	24 54	5 27.1
6	10½	21 6	9 7.0	16	11	24 55	5 23.2*
8	9	21 7	5 3.1	16	9	25 6	5 26.5
6	10	21 10	9 9.5	6	10½	25 7	8 55.6
16	9½	21 14	5 14.5	14	8½	25 12	5 42.1
15	10	21 22	4 45.4	14	12	25 16	5 50.8
15	9	21 50	4 33.5	6	11	25 21	8 54.1
16	10	22 5	5 20.2	14	12	25 42	5 50.0
15	11	22 11	4 50.4	14	12½	25 42	5 42.7
14	11½	22 33	5 44.9	15	9½	25 52	4 34.8
16	10½	22 33	5 21.7	15	8½	26 6	4 35.1
8	11½	22 39	4 57.9	6	10	26 17	9 5.0
8	11½	22 58	5 7.1::	8	12	26 22	4 58.1
16	12½	23 0	5 29.8	8	11	26 24	4 59.9
16	12½	23 9	5 27.6	8	11	26 31	4 53.0
15	11½	23 10	4 35.3	16	12	26 46	5 17.1
14	10	23 15	5 44.0	6	10	27 2	8 55.5
6	12½	23 24	9 3.8	14	12	27 18	5 32.0
15	9	23 25	4 32.3	15	11	27 22	4 46.2
8	10½	23 26	5 2.2	16	11½	27 36	5 23.5*
6	11½	23 28	9 5.4	15	12	27 45	4 32.9
15	11½	23 28	4 33.4	15	11½	27 56	4 38.2
15	11½	23 30	4 39.4*	16	12	27 58	5 26.7
14	11	23 32	5 37.0	8	11	28 2	5 9.3
14	8½	23 36	5 53.0	14	12	28 3	5 38.3
16	10	23 36	5 12.6	6	11	28 8	8 53 0
6	11	23 50	9 7.7	8	12	28 8	5 10 7
14	12	11 23 52	+5 38.2	16	11½	11 28 16	+5 25.7

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
15	9	11 28 20	+4 33.9	16	11	11 32 7	+5 15.0
6	12	28 33	8 53.5	6	11½	32 19	9 6.1
14 16	11	28 43	5 31.0	15	9	32 19	4 44.0
8	11	28 44	5 5.7	15	9	32 19	4 50.5
8	11	28 52	5 9.0	16	10	32 19	5 30.7
8	11½	28 58	5 10.4	6	11½	32 33	8 56.0
15	12½	29 3	4 30.8	16	8	32 37	5 12.6
8	10½	29 20	5 11.9	6	11½	32 46	9 6.5
6	10	29 24	8 59.9	15	9½	32 53	4 49.3
14	10	29 32	5 40.3*	6	11½	32 55	8 58.1
14	10	29 33	5 48.7	14	10	33 1	5 44.6
16	12	29 38	5 28.8	16	11	33 17	5 23.1
14	9	29 47	5 45.8	8	12	33 19	5 6.0
8	12½	29 58	5 6.6	8	12	33 21	5 5.7
15	8	30 2	4 40.5*	15	10½	33 29	4 44.5
8	11	30 6	5 5.5	16	9½	33 33	5 29.8
15	12	30 11	4 34.3	15	10	33 35	4 48.1
16	9	30 27	5 25.8	8	12	33 43	4 56.4
15	8½	30 29	4 33.2	14	11	34 14	5 42.8
6	12	30 38	8 54.4	14	10	34 20	5 35.3
8	10	30 40	5 10.3	14	12	34 36	5 42.9
16	10	30 46	5 25.0	15	12	34 37	4 32.9
14	10½	30 55	5 50.0	15	10	34 54	4 35.3
14	11	31 14	5 41.4	14	10	34 56	5 52.5
15	11½	31 21	4 49.6	8	8	34 58	5 2.4
16	10	31 24	5 16.2	16	12	35 11	5 27.8
8	12	31 32	4 56.6	8	11½	35 31	4 56.7
14	11	31 33	5 48.2	16	9	35 40	5 12.9
8	10½	31 35	5 3.1	16	11½	35 50	5 19.4
14	12	31 37	5 48.2	16	12	35 55	5 19.8
16	11	31 49	5 17.9	16	11½	36 14	5 17.5
8	9	31 54	4 59.7*	8	9	36 17	4 56.6
15	11½	31 54	4 47.1:	8	8½	36 33	5 6.8
16	10	32 2	5 18.3	15	9½	36 50	4 42.6
8	10½	11 32 7	+4 56.6	14	12	11 36 59	+5 47.6

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
14	10½	11 37 2	+5 47·9	14	12	11 42 49	+5 48·5
15	10½	37 6	4 41.2	16	12	42 51	5 20.6
16	12	37 16	5 14.3	14	12	42 57	5 49.4
16	12½	37 23	5 16.2	15	11	43 2	4 43.6
14	11	37 27	5 45.9	8	9	43 5	5 3.7:
8	11½	37 30	5 10.8	16	10	43 11	5 19.4
8	9	37 52	4 59.8	15	12	43 13	4 49.7
8	12	38 8	4 54.1	16	9	43 24	5 19.8
16	12	38 11	5 27.6	14	12	43 31	5 48.1
16	12½	38 34	5 28.3	14	11½	43 40	5 48.4
14	10	38 36	5 35.1	8	9½	43 46	5 3.1†
8	11	38 58	4 59.0	8	12	43 46	5 5·9
16	12	38 58	5 27.8	14	12	43 47	5 48.6
8	11	39 11	4 58.4	16	10½	43 49	5 21.0†
14	12	39 15	5 40.6	16	11	43 49	5 25.2
16	11	39 18	5 15.9	15	9	44 13	4 35.8
15	12	39 20	4 43.9	15	11½	44 16	4 46.8
8	11	39 28	5 3·9	15	11½	44 31	4 48.7
15	12½	39 34	4 45.0	8	9½	44 50	5 2.2
15	12	39 41	4 43·9	14	12	44 51	5 39.5
15	10½	40 3	4 40.3	14	10½	44 57	5 39.5
15	10½	40 4	4 45.2	8	12	45 7	4 55.6
15	11:	40 10	4 43.5	8	12	45 10	4 51.2
16	9	40 25	5 25.7*	16	12	45 33	5 20.7
8	10	40 34	5 4.8	16	11	45 41	5 25.7
8	11	40 36	5 10.7	16	12	46 1	5 30.6
8	9½	41 17	5 5·9	15	11	46 15	4 35·9
8	10½	41 30	4 54.7	16	10½	46 34	5 27.5
15	12	41 47	4 38.1	16	11	46 36	5 19.3
15	12	41 50	4 37.4	16	11	46 38	5 22.2
15	12	41 52	4 34.1	8	11	46 40	4 57.7
14	12	42 11	5 49.1	8	12	46 43	5 3.5
15	12	42 20	4 35.7	16	11½	46 52	5 28.5
8	9	42 23	4 53.1	8	10	46 57	5 0.2†
8	10½	11 42 46	+5 11.0	16	12	11 46 58	+5 30.3

* L. of double.

† (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
12	12	10 25 35	+6 39.7	12	10	10 28 13	+6 36.2
8	9½	25 36	5 9.4	8	11	28 20	4 54.6
15	10	25 37	4 35.8	6	10½	28 28	9 0.7†
9	11	25 44	9 13.2	12	11½	28 33	6 49.6
15	11	25 46	4 36.8	12	11½	28 35	6 49.7
15	10	25 53	4 50.4	15	8	28 54	4 43.5
10	12½	25 58	11 34.6	9	11	28 56	9 21.3
6	12	26 7	9 4.3	9	12½	28 56	9 27.0
14	10½	26 16	5 36.5	14	12	28 59	5 36.7
16	11	26 21	5 10.4	16	9½	29 0	5 16.0
14	12	26 22	5 52.7	16	10	29 7	5 20.3
8	12	26 26	4 55.4	6	11	29 13	8 56.6
14	11½	26 29	5 39.8	10	11	29 17	11 48.0
8	9	26 31	4 53.0	12	12½	29 19	6 35.4
12	11½	26 33	6 32.9	16	10	29 21	5 14.8
15	11	26 37	4 37.9*	12	12	29 23	6 37.1
12	12	26 45	6 37.3	14	12	29 25	5 36.9
10	12	26 49	11 46.4	15	12	29 30	4 37.6
8	11	26 57	4 52.1	10	11	29 37	11 50.2‡
16	9	27 2	5 24.5	15	11½	29 37	4 38.1
10	11	27 10	11 39.6	14	12½	29 42	5 45.7
15	9½	27 12	4 35.6	8	9½	29 49	5 7.0
16	11	27 15	5 14.2	12	12	29 53	6 40.2
15	10½	27 24	4 37.1	6	12	29 54	9 14.3
10	10½	27 25	11 39.8	16	10½	29 57	5 29.0
16	11	27 29	5 22.2	8	12½	30 3	5 5.0
12	9	27 30	6 35.0	10	10	30 9	11 30.6:
12	10½	27 35	6 37.6	16	8½	30 13	5 13.3
8	10½	27 42	4 52.6	6 9	11½	30 15	9 13.1
15	11	27 42	4 31.6	9	10	30 24	9 25.0
12	12½	27 44	6 37.7	8	10½	30 30	5 2.8†
12	12	27 57	6 35.9	16	9	30 30	5 28.1
16	11	28 3	5 16.3	15	11	30 35	4 46.4
8	11	28 6	5 4.9	8 15	8½	30 41	4 53.2
8	10½	10 28 11	+5 4.8	14	11½	10 30 51	+5 46.2

* L. of double. † (4). ‡ Suspect to be double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
15	12	10 30 57	+4 33·7	6	12	10 33 30	+9 9·6
16	11	30 57	5 14.8	15	12	33 31	4 32.3
16	10½	31 0	5 20.1	6	12	33 36	9 8.6
10	11½	31 1	11 35.3	9	10½	33 43	9 30.9
10	10½	31 9	11 35.7	8	11	33 44	5 5.7
15	9½	31 10	4 38.5	6	12	33 49	9 9.3
15	8½	31 12	4 32.7	14	11½	33 51	5 44.0
12	10	31 13	6 40.3	14	11½	33 54	5 45.3
14	10	31 13	5 39.8	16	11	33 58	5 31.8
9	10½	31 20	9 31.7	14	11	33 59	5 31.9
8	10½	31 27	5 4.2	16	10½	33 59	5 28.2
14	10½	31 27	5 39.8	15	12	34 9	4 50.7
14	11	31 30	5 43.8	15	10	34 11	4 47.6
6	11½	31 51	8 57.6	14 16	10	34 12	5 34.3
8	11	31 59	5 4.2	9	10	34 19	9 26.4
14	11½	32 5	5 45.0	12	9½	34 30	6 50.6
10	11	32 6	11 40.8	16	11	34 35	5 14.0
14	12	32 14	5 32.5	15	10	34 36	4 33.2
8	10	32 15	5 8.0	10	11½	34 39	11 37.9
10	12½	32 15	11 48.8	10	11	34 40	11 47.8
14	9	32 15	5 35.4	8	10½	34 53	5 4.7
8	11	32 32	5 2.7*	16	9	34 57	5 33.2
8	10	32 32	4 54.9	9	10	35 8	9 35.3
15	9	32 35	4 50.1	15	10	35 17	4 47.5
12	10	32 48	6 40.5	12	9½	35 24	6 37.9
6	11	32 49	9 10.1	6	12	35 25	8 56.4
6	10½	32 50	9 9.2	14	12	35 25	5 37.9
16	10½	32 54	5 17.0	14	12	35 37	5 39.1
12	10½	32 59	6 37.1	15	11½	35 37	4 44.5
16	10½	33 0	5 15.1	8	7½	35 38	5 5.2
12	11	33 8	6 36.7	12	12	35 39	6 35.0
16	12	33 13	5 15.7	10	10½	35 46	11 33.1
14	12	33 16	5 45.9	8	8½	35 50	5 1.9
12	10½	33 18	6 38.9	10	11	35 50	11 39.7
10	11	10 33 21	+11 46.2	10	11	10 35 57	+11 39.7

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
9	12	12 2 29	−4 37.8	9	10	12 5 47	−4 42.4
16	8	2 32	+5 9.5	7	11	6 7	+3 41.8
16	12½	2 33	+5 20.1	24	10	6 38	−2 31.2
24	12	2 34	−2 34.2	24	12	6 40	2 40.7
24	12	2 54	2 34.7	9	9½	6 43	4 33.2
24	9	2 55	2 47.4	24	12	6 49	−2 39.4†
24	11½	3 2	−2 35.7	7	10	7 1	+3 50.8
16	9½	3 3	+5 26.9	24	10½	7 33	−2 43.0
15	11	3 11	4 41.8	7	12½	7 35	+3 37.1
15	11	3 13	+4 45.9	9	12	7 39	−4 37.5
24	10½	3 33	−2 33.5	9	12½	8 14	4 34.4
16	10½	3 34	+5 18.2	24	11	8 19	−2 41.7
15	10	3 40	4 40.2	7	11½	8 23	+3 40.4
7	11	3 42	3 47.5	24	11½	8 32	−2 43.3
14	11	3 46	5 35.2	9	10½	8 36	4 31.9
14	11	3 49	5 37.5	24	11	8 39	2 36.8
7	10	4 4	+3 51.4	24	12	8 41	−2 44.2
9	10	4 10	−4 31.7	7	9½	8 57	+3 49.0
7	10	4 13	+3 50.9	9	10½	9 4	−4 30.8
9	11	4 13	−4 37.1	9	10	9 8	−4 44.6
24	10½	4 21	−2 45.6	7	10	9 30	+3 44.8*
15	10½	4 24	+4 48.5	9	11½	9 37	−4 39.3
24	10½	4 33	−2 35.2	7	11½	9 48	+3 45.2
24	10	4 37	2 44.0	9	10	9 48	−4 29.9
24	10½	4 59	−2 44.9	24	11	10 4	−2 32.9
7	12½	5 2	+3 54.2	7	12	10 9	+3 40.4
15	11	5 2	+4 49.3	9	11½	10 16	4 37.9
9	11½	5 7	−4 42.2	7	12	10 22	+3 44.5
9	11	5 11	−4 41.8	24	11	10 28	−2 39.2*
15	11	5 11	+4 50.9	9	10½	10 40	4 50.3
9	11	5 14	−4 42.9	24	9	11 1	2 46.2:
9	12	5 28	−4 42.2	9	12	11 24	−4 31.1
7	9	5 37	+3 51.7	7	10	11 26	+3 36.7
24	9	5 37	−2 32.8	7	12	11 27	+3 47.1:
24	10½	12 5 40	+2 43.9	9	11½	12 11 34	−4 30.5

* (4). † S. *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
9	11½	12 11 51	−4 33.3	9	12	12 17 37	−4 49.7
9	9	12 5	4 31.4	7	10½	17 43	+3 52.8
9	9	12 10	4 34.1	24	11	17 46	−2 31.9
24	11½	12 22	−2 44.6	9	12	17 57	4 45.3
7	12½	12 37	+3 48.8	24	12	17 58	2 29.4
7	12½	12 49	3 49.4	9	12	18 19	4 43.5
7	10½	12 51	+3 47.5	9	9½	19 5	4 51.4
24	11	12 51	−2 28.9	24	11	19 19	2 42.4
9	11½	12 52	4 28.2	9	11	19 58	−4 29.0
24	9½	13 8	−2 46.9	7	11½	20 5	+3 47.3
7	11	13 12	+3 46.1	9	11	20 24	−4 49.1
9	10	13 22	−4 47.7	7	11	20 33	+3 39.2
24	9½	13 45	2 42.4	9	11	20 34	−4 42.1
24	11½	13 53	−2 30.9	7	10½	20 36	+3 43.0*
7	12	14 2	+3 37.0	9	9½	20 50	−4 46.5
24	11	14 7	−2 32.6	9	11	21 4	4 36.2
24	11	14 15	−2 32.9	9	12	21 15	4 35.7
7	11	14 18	+3 50.9	9	10½	22 24	4 43.2
9	11	14 37	−4 47.9	9	9	22 25	−4 29.5
9	11	14 51	4 34.7	7	12	22 32	+3 38.1
24	10½	15 0	2 49.8	9	11	22 32	−4 34.3
24	11	15 10	2 36.7*	7	12	22 38	+3 39.4
9	10	15 12	4 38.1	9	9½	22 38	−4 31.2
24	10	15 21	−2 47.6	7	11	23 4	+3 52.0
7	10	15 41	+3 38.7	7	11	23 22	+3 34.5
9	11	15 46	−4 30.8	9	12	23 24	−4 35.0
7	12	15 48	+3 35.2	9	11½	23 28	−4 43.3
7	10	15 51	+3 41.2	7	11½	23 52	+3 35.4
9	11½	16 17	−4 37.3	9	12	24 24	−4 35.0
9	10	16 31	−4 39.1	9	11½	24 28	−4 43.3
7	12	16 38	+3 52.6	7	10	24 29	+3 46.9
24	9	16 50	−2 40.1	7	12	24 56	3 51.2
24	10	16 53	2 28.9	7	12	25 8	3 47.9
24	11	17 1	−2 44.9	7	10½	25 8	+3 36.9
7	10	12 17 19	+3 33.5	9	12	12 25 22	−4 48.3

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
9	12	12 26 4	—4 45.7	9	11	12 32 10	—4 34.4
9	10	26 18	4 44.5	7	11½	32 22	+3 50.5
9	12½	26 25	—4 47.5	24	11	32 43	—2 35.1
7	10½	26 30	+3 45.1	24	11	32 48	—2 30.6
7	11	26 53	+3 46.6*	7	11	32 53	+3 55.0
9	11	27 20	—4 28.0	24	9½	33 4	—2 33.3
9	12	27 23	4 44.8	16	11	33 11	6 35.9
9	10	27 42	4 29.9	24	10	33 27	2 35.9
9	11½	28 1	4 49.7	9	12	33 32	4 46.2
9	12	28 28	4 33.5	16	12	33 34	6 37.0:
9	12½	28 37	—4 34.8	16	11½	33 43	—6 38.7
7	12½	28 39	+3 39.0	7	12	33 54	+3 52.6
7	12½	28 40	+3 41.4	16	11	33 54	—6 36.0
16	10	28 47	—6 41.8	24	10	33 54	—2 28.5
9	9½	28 56	4 35.7	7	11½	33 57	+3 36.6
9	12	29 4	—4 40.2	9	10	33 59	—4 51.8
7	11	29 10	+3 50.1	16	11	34 1	—6 36.9
16	10	29 10	—6 39.4†	7	10½	34 18	+3 48.3
16	10	29 19	—6 43.1	9	11	34 25	—4 45.9
7	11	29 23	+3 52.2	24	12	34 25	2 31.9
9	11	29 36	—4 31.4	24	10½	34 40	2 35.4
16	10	30 14	—6 39.5	9	10	34 46	4 37.3
7	11	30 21	+3 36.0	24	12	34 52	—2 32.1
9	11	30 22	—4 45.4	7	11½	35 0	+3 50.4
9	11	30 36	—4 31.9	7	12	35 6	+3 52.4
7	10	30 40	+3 51.1	14	11½	35 8	—3 26.2
9	11	30 49	—4 30.5	9	10½	35 10	4 30.3
16	12	31 25	6 32.2	16	12	35 32	6 34.6
16	12	31 31	6 32.8	24	11	35 32	2 29.4
16	12	31 33	6 39.2	16	10	35 38	6 43.5
16	10½	31 42	6 31.5	16	12	35 44	6 31.1
16	10½	31 48	—6 31.6	24	10½	35 48	2 41.4
7	12½	31 50	+3 46.9	16	12	35 50	6 34.6
9	Neb.	31 56	—4 31.2	24	12	36 11	—2 32.7
7	11½	12 31 59	+3 41.5	7	12	12 36 16	+3 50.1

* L. of double. † (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
24	10	12 36 17	−2 31.9	16	11	12 39 43	−6 49.2
7	10½	36 28	+3 47.2	7	12	39 44	+3 39.0
14	9	36 38	−3 30.5	9	12	39 51	−4 35.7
14	12½	36 41	3 22.7	14	12	39 51	3 11.0
14	11	36 44	3 23.9	24	10½	40 3	−2 39.2
9	10	36 55	4 29.0	7	11½	40 9	+3 48.6
24	11	37 1	2 30.7	16	10½	40 18	−6 43.8
16	12	37 9	6 45.6	24	Neb.	40 31	2 30.7
9	9	37 13	4 25.8	14	10	40 41	−3 10.2
24	12½	37 16	−2 33.8	7	11	40 47	+3 34.2
7	10½	37 23	+3 51.8	14	12	40 49	−3 22.6
7	Neb.	37 27	+3 52.5*	14	10½	41 12	3 10.6
14	9	37 30	−3 31.2	24	11	41 31	2 45.2
16	11	37 30	6 46.4	9	12	41 33	4 33.4
24	12	37 46	2 35.7	9	12	41 37	4 33.7:
16	12	37 47	6 44.2	16	9	41 37	−6 37.8
9	12	37 58	4 44.8	7	12	41 38	+3 46.4
9	11	38 0	4 49.7†	24	10	41 38	−2 39.3
24	9	38 0	2 32.7	14	12½	41 39	3 11.4
24	10½	38 7	−2 26.4	9	11½	41 43	−4 29.6
7	9½	38 8	+3 56.3	7	11½	41 44	+3 37.9
16	10	38 21	−6 36.0	24	11	41 44	−2 35.6
16	10½	38 21	6 48.6	16	10	41 49	6 36.5
14	12	38 30	3 19.4	14	12	42 23	3 19.4
24	11½	38 52	2 28.9	24	10½	42 26	−2 37.4‡
16	11	39 3	6 51.9	7	11½	42 37	+3 46.7
16	10	39 13	6 37.5	16	9	42 40	−6 32.5
9	11	39 20	4 34.7	7	11½	42 45	+3 52.3
9	10	39 24	−4 0.1‡	16	9½	42 45	−6 36.0
7	11½	39 25	+3 44.9	9	10	42 55	−4 43.7
24	10	39 25	−2 42.9	7	10	43 1	+3 54.8
9	12½	39 26	4 35.4	9	12	43 4	−4 43.7
24	12	39 32	2 45.1	14	10	43 10	3 17.7
16	11	39 40	6 46.6	24	11	43 14	2 36.4
14	12	12 39 43	−3 11.5	24	11	12 43 25	−2 40.7

* Faint and round. † Southern of a double. Larger 10:h Mag. ‡ (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
9	11	12 43 26	—4 40.3	9	11½	12 47 2	—4 32.0
16	10½	43 39	6 49.9	9	11½	47 12	4 28.3
24	10	43 39	2 32.4	16	11½	47 16	6 46.9†
9	9	44 10	4 31.8	14	11	47 19	3 16.4
14	10½	44 12	3 30.5	14	12	47 24	3 16.8
16	11½	44 12	—6 46.5	24	10	47 30	2 29.8
7	10½	44 13	+3 38.2	24	10½	47 31	2 42.0
24	11	44 15	—2 30.9	24	9	47 34	2 47.6
9	11½	44 18	4 34.8	9	11	47 37	4 29.0
14	10½	44 22	3 21.8	16	11	47 43	6 34.0
24	9	44 22	2 34.6	9	11	47 52	4 27.7
9	8	44 36	4 33.9*	24	11	48 27	2 46.6
24	11	44 39	2 31.3	24	10	48 29	2 34.5
16	11	44 43	6 38.7	14	10½	48 32	3 22.2‡
9	12	44 46	4 33.3	14	11	48 36	3 22.9
14	12	24 58	—3 11.9	16	10½	48 37	6 41.7
7	12	45 3	+3 45.7	9	9	48 38	—4 35.6
14	12	45 6	—3 13.8	7	11	48 39	+3 38.9
7	11	45 15	+3 48.5	14	11	48 45	—3 22.8
14	12	45 35	—3 13.2	7	12	49 7	+3 51.4
24	11½	45 40	2 29.1	7	12	49 9	+3 45.8
16	11½	45 49	6 45.2	16	11	49 9	—6 49.8
9	11	46 10	—4 29.9	7	12	49 10	+3 49.3
7	9	46 12	+3 56.2	7	12	49 31	+3 48.8
7	11½	46 24	3 51.7	9	11	49 37	—4 32.6
7	9½	46 27	+3 44.9	24	10	49 47	2 47.6
24	11	46 27	—2 41.3	14	11½	49 51	3 16.8
9	9	46 35	4 31.2	9	11	49 53	4 47.2
24	11½	46 37	2 40.2	14	11	49 56	3 12.1
9	9	46 52	4 27.7	14	10	49 59	3 22.0§
14	10½	46 59	3 21.7	9	9	50 6	4 29.8
14	10½	47 0	3 20.4	24	11½	50 16	2 28.8
16	10	47 0	—6 49.2	24	11½	50 17	2 29.4
7	12	47 1	+3 44.7	14	11	50 18	3 11.9
14	12	12 47 1	—3 10.1	16	10	12 50 37	—6 49.8

* A 12th Mag. *p*. † A. 10½ S. *f*. ‡ Double. § L. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
7	10	12 50 59	+3 48.2	24	10	12 54 18	—2 29.0
9	10	51 3	—4 37.6*	7	11	54 21	+3 38.1
24	11	51 8	—2 40.5	16	11	54 23	—6 48.0
7	12	51 13	+3 49.6	7	11	54 27	+3 51.6
14	11½	51 18	—3 24.7	24	10½	54 29	—2 36.0
9	12	51 19	4 37.1	9	9	54 33	4 28.5
16	10½	51 19	6 30.5†	9	9	54 45	—4 30.8
24	12	51 24	2 32.6	7	11½	54 55	+3 46.3
14	12	51 41	3 16.5	16	9	55 11	—6 27.8
16	11½	51 41	6 49.6	24	10	55 18	2 36.3
24	11	51 47	2 35.4	14	9	55 21	3 28.7
24	11	51 54	2 33.1	16	11	55 22	6 38.6
14	12	51 56	—3 15.5	9	12	55 51	4 48.0
7	11½	51 59	+3 43.1‡	9	12	55 58	4 44.2
16	11	52 6	—6 42.1	24	11	56 1	—2 34.2
7	10	52 9	+3 55.1	7	12	56 7	+3 49.6
14	9	52 15	—3 29.8	24	9½	56 13	—2 33.1†
14	9½	52 17	3 18.5	14	9½	56 21	3 12.3
9	11	52 28	4 51.7	9	11	56 29	4 47.1
16	11	52 31	6 43.0	14	9½	56 29	—3 10.2
16	12	52 36	6 49.4	7	12	56 30	+3 50.6
14	9	52 55	3 31.7	16	11	56 33	—6 32.7
9	11	52 56	4 42.3	24	11½	56 36	2 41.1
24	10½	53 2	2 47.3	14	12½	56 38	3 11.9:
9	11½	53 4	4 47.3	24	9½	56 49	2 50.2
24	10½	53 28	2 47.1	16	12½	56 58	6 32.6
14	9	53 36	3 26.3	14	12½	57 1	—3 13.4
16	12	53 45	6 33.9	7	12	57 12	+3 38.0
16	12	53 52	6 48.2	16	11	57 15	—6 33.8
24	10	53 53	2 26.7	24	11	57 16	2 47.2
14	10	53 54	3 16.7	16	11	57 17	—6 48.1
9	10	53 57	4 27.9	7	10½	57 18	+3 43.1
24	9½	54 5	2 30.6	9	10½	57 32	—4 34.9
14	12	54 6	3 26.4	16	11	57 35	—6 48.7
14	9½	12 54 18	—3 25.3	7	11	12 57 40	+3 46.4

* (4). † L. of double. ‡ (4.) L. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
14	11	12 57 41	—3 24.5	9	11½	13 1 28	—4 38.2
14	9½	57 46	3 24.6	9	Neb.	1 30	4 35.6
9	10½	57 47	4 44.6	9	11½	1 40	4 32.3
24	12	57 51	2 44.9	14	12	1 42	3 10.7
16	12	58 3	6 45.4	14	12	1 45	3 12.3
9	10½	58 14	4 31.0	16	11	1 51	6 49.9
24	12	58 17	2 45.1	16	10	1 53	6 34.0
16	9	58 22	6 34.4	16	10	1 57	6 36.8
24	10½	58 34	2 50.1	16	11	2 30	6 47.3
14	12	58 39	3 13.9	14	12	2 51	3 27.8
9	9	58 50	4 36.6	16	11	2 58	6 45.4
16	11	58 59	6 31.9	14	11	3 3	3 12.2
14	9	59 19	3 14.2	16	10½	3 18	6 38.8
24	9	59 23	2 29.8	16	10½	3 21	6 47.9
16	10½	59 25	6 29.2	9	11	3 24	4 49.7
24	11	59 28	2 35.0	9	12	3 40	4 48.7
24	11	59 29	2 30.0	9	10½	3 46	4 42.0
14	10	12 59 34	3 15.4	16	8	3 51	6 35.7
24	10	13 0 0	—2 30.7	16	12	3 58	6 47.8
7	10½	0 10	+3 35.6	14	11	4 5	3 26.9
16	12½	0 15	—6 46.6*	9	10	4 6	4 31.8
14	9½	0 16	3 28.0	14	9½	4 55	3 23.1
14	10½	0 17	3 16.9	14	8	4 55	6 49.8
24	11	0 20	2 28.7	9	10	4 58	4 41.4
16	12½	0 22	6 46.4	16	12	5 1	6 46.5
16	12	0 27	6 45.2	16	12	5 16	6 48.1
9	11½	0 29	4 45.8	9	9	5 27	4 35.7
9	10	0 39	4 35.6	16	9	5 40	6 45.8†
16	11	0 39	6 47.4	9	11	6 39	4 35.4
14	10½	0 58	3 14.1	16	12½	7 31	6 47.6
16	12	0 59	—6 46.1	16	11	7 42	6 44.1
7	12½	1 6	+3 38.6	16	12	7 58	6 35.0
14	10	1 7	—3 10.0	16	10	9 5	6 34.6
16	11	1 15	—6 52.1	16	11	9 27	6 47.7
7	10	13 1 28	+3 48.7	16	12	13 10 5	—6 47.3

* *p.* of double.

† A. 9th Mag. *f.*

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
9	10	13 10 30	−4 41.2*	9	11½	13 20 17	−4 35.2
16	11	10 52	6 45.4	16	12	20 26	6 33.0
16	12	11 5	6 43.7	16	12	20 30	6 29.0
16	11	11 7	6 49.9	9	12	20 34	4 48.4
16	10½	11 19	6 43.4	9	12	20 56	4 42.6
16	9½	11 30	6 42.2	9	11½	21 27	4 35.5
9	11	11 46	4 47.5	16	12	21 31	6 41.8
9	10	11 51	4 43.1	16	11	21 42	6 34.8
9	11	12 12	4 40.8	16	11	22 7	6 46.6
9	12	12 19	4 37.4	9	12	22 8	4 44.8
16	8	12 46	6 41.5*	9	11	22 22	4 41.0
16	12	12 57	6 43.7	16	11	22 54	6 49.6
16	12	13 19	6 37.4	9	11½	23 6	4 44.9
16	11½	13 30	6 34.4	9	12	23 22	4 31.9
9	12	14 1	4 47.2	9	11	23 25	4 50.9
16	9	14 49	6 45.2	16	8	24 7	6 48.7
9	12	14 51	4 31.1	16	9½	24 35	6 28.3
9	10	15 2	4 40.6*	9	11	24 43	4 42.7
9	10	15 4	4 40.7*	16	9	24 47	6 32.2
9	11½	15 10	4 33.7	9	10	25 13	4 42.5
9	11½	15 10	4 31.0	16	11½	25 44	6 46.0
16	10	15 26	6 45.7	9	11	25 48	4 37.8*
16	9	15 50	6 48.4	9	11½	25 53	4 45.3
9	12	16 43	4 34.8	16	8	26 1	6 30.7
9	12	16 59	4 35.4	9	10	26 45	4 44.9
16	12	17 14	6 47.2	16	11	26 47	6 52.6
9	11	17 29	4 32.5	16	9	26 49	6 49.8
9	11½	17 48	4 36.3	9	12	27 30	4 37.9
16	11	18 1	6 31.1	16	11½	27 56	6 36.9
9	11	18 15	4 39.4	16	10	28 2	6 30.7
16	11	18 33	6 32.9	9	12	28 4	4 40.0*
16	12	18 39	6 44.5†	16	11	28 16	6 38.1
9	9½	19 3	4 28.4	16	12	28 24	6 38.3
9	9½	19 13	4 36.6	16	12	28 30	6 34.6
9	11½	13 19 38	−4 43.3	16	12	13 28 36	−6 37.5

* (4). † Double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
16	12	13 29 24	—6 38.3	9	11½	13 31 22	—4 36.0
9	12	29 26	4 35.4	9	10½	31 36	4 31.4
9	12	29 52	4 41.2*	16	12	31 51	6 43.9
9	10½	29 54	4 42.6	16	11	32 7	6 43.3
16	9	30 34	6 34.1	16	10	32 12	6 37.0
16	11½	30 43	6 48.5	16	10	13 32 22	—6 39.1
9	11½	13 31 14	—4 32.3				

* A. 12th S.

APPROXIMATE MEAN PLACES, FOR JANUARY 1, 1850,

OF

254 STARS NEAR THE ECLIPTIC,

OBSERVED IN MAY, 1852, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
20	12	14 27 45	—18 48.1	20	10	14 38 26	—18 32.8
20	12	28 19	18 37.7	20	11	39 27	18 47.2
20	10	30 47	18 35.7	20	11	39 46	18 34.2
20	9	30 52	18 48.2	20	10	39 50	18 31.0
20	10½	31 11	18 40.8	20	11½	40 18	18 31.2
20	9	31 49	18 43.1	20	11½	40 38	18 46.6
20	9½	32 4	18 43.8	20	9½	42 3	18 35.1
20	10	32 52	18 42.9	20	8	42 28	18 51.3
20	11½	34 16	18 34.6	20	12	42 31	18 42.2
20	12	34 30	18 42.4	20	10½	43 40	18 34.6
20	12	36 51	18 35.6	20	9	43 52	18 49.2
20	12	36 57	18 43.2	20	12	44 0	18 45.5
20	12	36 57	18 45.5	20	11½	44 23	18 45.3
20	11	38 11	18 46.7	20	11½	45 53	18 32.4
20	9	14 38 26	—18 42.7	20	10½	14 46 26	—18 42.9

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
20	11	14 47 21	—18 27.7	20	9	15 10 15	—18 49.9
20	11	47 34	18 27.2	20	12	10 57	18 46.8
20	11½	47 43	18 36.2	20	11	11 37	18 33.2
20	11½	49 22	18 50.0	20	11	12 31	18 34.9
20	12	50 21	18 46.8	20	11	12 44	18 36.3
20	11	51 16	18 47.6	20	11	13 10	18 35.9
20	11	51 33	18 29.7	20	11	14 24	18 42.7
20	8½	53 2	18 40.0*	20	10	14 24	18 46.7
20	12	53 10	18 34.5	20	10	14 50	18 35.0
20	11	53 41	18 32.8	20	9½	15 37	18 34.1
20	10	53 53	18 29.8	20	11½	16 4	18 29.8
20	11	54 51	18 26.6	20	9½	16 6	18 33.2
20	12	54 58	18 40.3	20	10½	17 4	18 48.1
20	11½	55 59	18 49.2	20	12	17 8	18 42.6
20	10½	56 1	18 37.9	20	11½	17 26	18 47.2
20	10	56 42	18 48.0	20	11½	17 37	18 46.3
20	11½	58 56	18 38.8	20	9	19 5	18 38.1
20	10½	59 20	18 45.2	20	11	19 8	18 34.0
20	11	14 59 54	18 42.2	20	11	19 17	18 35.2
20	11	15 0 33	18 45.4	20	10	20 10	18 36.0
20	10	0 39	18 43.6	20	11½	20 25	18 33.3
20	11	0 58	18 30.8	20	12	20 36	18 33.3
20	10	1 42	18 49.2	20	10½	21 28	18 37.4
20	11	1 56	18 47.2	20	12	21 33	18 47.2
20	10½	2 37	18 33.6	20	12	23 24	18 34.7
20	10	3 20	18 43.3	20	10	23 37	18 35.8
20	10	3 24	18 44.1	20	11½	24 25	18 31.9
20	9	5 58	18 40.9*	20	11	25 14	18 32.0
20	9	7 37	18 33.2	20	12	25 15	18 42.1
20	12	8 3	18 31.5	20	11	25 31	18 33.3
20	10	8 39	18 32.4	20	12	26 57	18 43.3
20	9	8 50	18 27.5	20	9	27 23	18 35.9
20	9½	9 48	18 43.2	20	10	27 23	18 47.0
20	9½	9 48	18 29.7	20	9½	28 31	18 38.2*
20	9½	15 9 57	—18 41.3	20	8	15 29 7	—18 44.6

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
20	10	15 29 11	−18 40.2*	20	12	15 50 14	−18 28.6
20	12	30 53	18 32.1†	20	12	50 41	18 45.7
20	11	30 58	18 27.5‡	20	12	50 43	18 47.0
20	10	32 0	18 30.9	20	10½	51 48	18 45.4
20	10	32 25	18 36.9*	20	9	52 20	18 32.0
20	10½	33 3	18 37.2*	20	11½	53 13	18 42.2
20	12	33 4	18 42.9	20	12	53 14	18 43.1
20	11	33 19	18 40.4	24	11½	53 50	18 35.3
20	10	34 17	18 30.1	20 24	10	54 7	18 37.0
20	11	34 45	18 35.5	20 24	10	54 14	18 46.8
20	11½	34 57	18 35.1	24	11	54 18	18 38.6
20	10½	35 46	18 36.0	20 24	11	54 30	18 41.0
20	11	35 58	18 30.5	20	12	55 1	18 35.7
20	12	37 12	18 44.5	24	9	55 20	18 40.9*
20	11	37 23	18 38.9	20 24	9	56 8	18 44.4
20	10	37 26	18 45.0	20 24	10½	56 38	18 33.0
20	9	38 22	18 39.7	20 24	10	57 16	18 33.3
20	11½	39 48	18 34.5	24	10	57 21	18 30.3
20	9	40 1	18 45.1	24	11	57 44	18 45.5
20	11½	40 7	18 43.0	20 24	11	58 25	18 37.4
20	11	40 59	18 29.5	20 24	11½	58 40	18 35.6
20	10½	41 39	18 47.0	20 24	11½	58 51	18 33.0
20	10½	41 50	18 42.0	20 24	10	15 59 3	18 32.5
20	10	42 40	18 47.9	24	9½	16 0 24	18 38.6*
20	10½	42 53	18 42.5	20 24	12	0 36	18 34.3
20	10	44 4	18 43.0	24	11½	0 56	18 44.9
20	10	44 30	18 41.2	20	11½	1 4	18 35.7
20	11	45 23	18 39.9	24	11	1 50	18 43.5
20	12	45 50	18 35.9	24	11	2 27	18 40.9
20	11	46 53	18 26.5	24	11	2 47	18 46.5
20	10½	47 45	18 28.6§	24	11	2 54	18 45.9
20	10½	48 10	18 27.4	24	11	3 14	18 46.9
20	10	48 18	18 41.1	24	11	3 17	18 43.3
20	11	48 36	18 39.0	24	11	4 1	18 28.4
20	12	15 50 13	−18 44.6	24	11	15 4 39	−18 35.4

* (4). † N. of double. ‡ S. of two. § *p.* of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
24	9½	15 5 59	−18 47.6	24	11	15 32 45	−18 41.0
24	10	6 10	18 51.1	24	9	33 13	18 38.6*
24	11½	7 25	18 40.7	24	11	34 24	18 31.3
24	11	9 24	18 41.2	24	11	35 11	18 44.4
24	11½	10 42	18 47.4	24	11½	35 15	18 42.1
24	10½	10 45	18 49.5	24	11	35 24	18 44.9
24	10	11 14	18 47.7	24	11	35 33	18 43.1
24	10	12 2	18 49.3	24	11	35 51	18 42.0
24	10	12 27	18 29.6	24	11	38 32	18 51.2
24	12	13 7	18 43.3	24	12	39 10	18 32.6
24	11½	13 14	18 43.6	24	12	39 53	18 34.5
24	11½	13 35	18 45.3	24	10½	40 21	18 42.5
24	11	13 56	18 44.3	24	11½	40 59	18 33.9
24	11	14 46	18 33.5	24	11	41 24	18 33.1
24	11	15 19	18 33.0	24	10	42 3	18 47.0
24	11½	15 41	18 33.4	24	10½	42 47	18 48.2
24	10	15 59	18 32.9	24	10½	43 13	18 39.3
24	10½	16 16	18 45.5	24	10½	43 25	18 44.9
24	10	17 28	18 48.2	24	11	43 34	18 33.4
24	9	17 58	18 47.0	24	11	43 45	18 34.1
24	11½	19 20	18 44.9	24	10½	45 7	18 43.4
24	11	20 42	18 34.7	24	12	45 13	18 42.8
24	11	20 47	18 46.3	24	8½	45 16	18 29.2
24	12	23 33	18 44.5	24	8½	45 19	18 38.9*
24	10	24 48	18 28.2	24	9½	46 18	18 31.1
24	11	25 43	18 52.4	24	11	48 12	18 47.4
24	11	25 45	18 49.4	24	12	48 13	18 43.3
24	9½	26 28	18 39.0	24	10½	48 58	18 35.1
24	11	28 42	18 48.0	24	11½	49 7	18 38.7
24	10½	29 2	18 48.5	24	10½	49 10	18 35.8
24	10	29 16	18 43.1	24	11	50 17	18 31.5
24	11	32 20	18 42.2	24	11	50 23	18 31.1
24	11½	32 24	18 48.0	24	8	50 38	18 32.0
24	11	32 31	18 43.8	24	11	54 15	18 49.5
24	11	15 32 37	−18 38.5	24	9	15 54 51	−18 42.3

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
24	11½	15 55 3	—18 43.1	24	12	15 57 23	—18 44.5
24	11½	55 9	18 43.8	24	9	58 18	18 52.1
24	10	55 9	18 46.7	24	9	58 39	18 47.3
24	12	55 27	18 40.1*	24	11	59 21	18 38.1
24	11	55 37	18 44.8	24	11	59 24	18 38.6
24	10½	56 44	18 33.4	24	11	59 29	18 34.3
24	11	15 57 10	—18 44.9	24	11	15 59 31	—18 37.0

* Smaller of double.

APPROXIMATE MEAN PLACES FOR JANUARY 1, 1850,

OF

720 STARS NEAR THE ECLIPTIC,

OBSERVED IN JULY, 1852, AT MARKREE.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
7	12	17 45 7	—24 22.2	7	11	17 49 19	—24 23.8
7	9½	45 52	24 9.7	7	11	49 28	24 11.2
5	11	46 8	19 35.3	9	11	49 30	25 21.2
7	11	46 30	24 29.4	7	11	50 12	24 19.1
7	11	46 35	24 29.2	9	10	50 39	25 8.6
5	10½	46 48	19 47.3	9	11	50 50	25 21.0
5	10½	47 19	19 47.6	9	11	51 6	25 8.8
7	10	47 19	24 10.6	7	9½	51 41	24 11.7
9	11	47 30	25 12.0	9	11	51 44	25 15.4
7	8½	47 48	24 23.8	5	10½	51 49	19 41.7
9	11	47 57	25 20.3	7	10	51 50	24 8.4
9	11	48 11	25 21.7*	5	10	52 11	19 51.5
9	11	48 23	25 21.3	5	11	52 19	19 41.0
5	10	48 41	19 51.8	9	12	52 28	25 29.0
7	11	17 48 42	—24 14.6	7	10	17 52 40	—24 21.5

* (4).

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
9	11	17 53 15	—25 14.1	7	12	18 1 44	—24 9.6
9	11	53 25	25 28.1	9	11½	1 53	25 14.0
7	11½	54 11	24 14.1	7	12	1 55	24 10.8
9	9½	54 11	25 15.6	7	11½	2 7	24 11.0
9	9½	54 16	25 15.9	9	11	2 22	25 22.8
9	11	54 39	25 24.5	7	12	2 58	24 24.1
9	10	54 42	25 28.5	7	11½	3 0	25 27.0
7	11	55 11	24 26.2*	22	11½	3 1	25 33.7
7	10	55 14	24 23.2*	22	11½	3 24	25 40.4
7	11	55 24	24 26.9*	5	10	4 3	19 46.5
9	10½	55 26	25 11.8	7	9	4 24	24 18.8‡
7	11	55 30	24 21.0*	7	11	4 27	24 27.3
9	11	56 11	25 16.4	7	11	4 37	24 23.6
9	10½	56 29	25 14.5	7	11	4 42	24 26.7
9	10½	56 46	25 31.6	7	10½	4 46	24 20.3
5		57 4	19 27.8	9	11	5 4	25 18.9
7	12	57 9	24 10.6	9	11	5 20	25 25.2
9	9	57 16	25 28.9	9	11	5 42	25 15.4
5	10½	57 26	19 33.6	5	11½	5 49	19 45.1
9	11½	57 48	25 13.4	22	9	5 54	25 49.7†
22	9	58 17	25 34.7†	7	10½	6 14	24 12.2
7	10½	58 45	25 27.8	7	10	6 18	24 10.4
7	11	59 3	24 25.7	7	12	6 25	24 10.5
22	9½	59 5	25 43.8†	22	9½	6 40	25 45.1
22	12	59 25	25 44.1	9	10	6 42	25 29.9
9	11½	59 26	25 21.8	5	9½	6 46	19 31.0
5	11	59 34	19 52.8	22	11	6 47	25 45.0§
7	10½	17 59 56	24 25.8	9	11½	6 53	25 17.5
5	11	18 0 23	19 44.4	22	11½	6 53	25 36.3
9	11	0 34	25 28.3	9	11½	6 56	25 18.2
9	9½	0 41	25 18.2	22	9½	7 2	25 35.4†
7	11	0 58	24 26.0	7	12	7 17	24 12.9
9	10½	1 21	25 20.4	9	11	7 36	25 13.7
22	10½	1 28	25 41.8‡	7	12	7 37	24 27.0
9	11	18 1 40	—25 12.8	9	10½	18 7 38	—25 12.0

* Form a coarse cluster. † A. Z.—(Argelander's Zones.) ‡ (4). § 11th S. f.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
7	11	18 8 6	—24 24.6	7	10½	18 13 9	—24 12.3
5	10½	8 8	19 36.2	22	10½	13 38	25 28.4
7	10½	8 12	24 26.9	5	10	14 2	19 49.8
9	9	8 21	25 23.3	7	10	14 20	24 21.4
5	9	8 35	19 32.0	5	10½	14 21	19 46.2
9	11	8 45	25 28.5	7	11	14 24	24 20.2
22	10½	8 56	25 36.9	22	11½	14 35	25 37.9
7	10	9 3	24 24.4	9	11	14 40	25 29.1
9	11	9 5	25 18.6	22	11	14 50	25 51.4
7	10	9 7	24 21.3	9	11	15 2	25 21.6
7	10½	9 29	24 26.5	7	11	15 4	24 19.9
9	11½	9 30	25 26.2	22	11	15 4	25 37.1
9	9½	9 48	25 22.6	5	9	15 12	19 27.9
9	11	9 49	25 25.4	5	8½	15 17	19 38.9*
22	10	9 52	25 34.3	9	12	15 17	25 15.4
9	9½	10 6	25 23.2	9	11½	15 27	25 28.7
22	10	10 11	25 43.9	5	10	15 46	19 48.4
5	11	10 18	19 42.0	7	9	15 53	24 29.4
9	10½	10 25	25 15.2	9	11	16 10	25 15.0
7	11	10 32	24 25.6	22	11½	16 21	25 45.4
7	11	10 48	24 19.7	22	10½	16 39	25 33.5
7	11½	10 52	24 23.0	9	11	16 48	25 25.2
9	11½	11 18	25 14.7	7	11½	16 52	24 27.6
9 22	9	11 27	25 31.7	9	11½	17 0	25 14.2
22	10½	11 31	25 48.2	9	11	17 6	25 12.9
9	11½	11 33	25 12.7	7	11	17 13	24 27.5
7	11	11 49	24 11.6	9 22	10½	17 33	25 32.1
7	11	12 11	24 26.4	22	11	18 2	25 52.8
9 22	9½	12 14	25 29.3	7	11	18 12	24 18.8*
22	11	12 24	25 34.6	7	11½	18 23	24 25.4
9	11½	12 30	25 25.3	22	10	18 43	25 46.0
22	10½	12 41	25 48.9	9	10½	18 45	25 24.6
7	11½	12 46	24 24.5	9	10½	19 31	25 21.7
5	11½	12 51	19 44.7	7	11	19 36	24 30.1
9	9½	18 12 51	—25 25.9	7	11	18 19 43	—24 27.4

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
22	11	18 19 51	—25 33.8	9	9½	18 28 12	—25 25.0
22	11	19 53	25 38.5	7	11½	28 20	24 11.7
9	11	20 31	25 29.0	9	11	28 29	25 14.7
7	12	20 33	24 23.4	22	11½	28 57	25 44.8
7	12	20 36	24 25.3	7	11½	29 10	24 16.7
9	11	20 37	25 23.8	9	10½	30 8	25 21.7§
9	10½	20 59	25 26.2	7	11	30 25	24 26.9
22	11	21 5	25 48.0	22	9½	30 33	25 37.7†
7	10	21 24	24 19.9	9	11	30 48	25 25.0
9	12	21 26	25 25.5	7	10½	31 5	24 25.8
22	Neb.	21 40	25 35.5*	7	10½	31 24	24 16.2
7	12	22 4	24 12.7	22	11	31 27	25 39.1§
7	10½	22 22	24 15.7	9	9½	31 34	25 8.6
22	9½	22 24	25 47.4†	9	11	31 36	25 24.4
7	11½	22 28	24 16.3	7	12	31 37	24 10.2:
9	11	22 43	25 12.8	22	10½	32 4	25 33.8
22	10½	22 50	25 49.3	9	9½	32 31	25 18.1
9	11½	22 52	25 17.5	22	12	32 50	25 50.2
7	11	22 53	24 16.5	9	11½	32 54	25 16.8
9	11	23 20	25 13.7	22	11	32 58	25 45.2
22	12	23 37	25 36.6	9	10	33 20	25 24.6
9	9	23 39	25 11.4	9	9½	33 21	25 16.2
22	12½	23 47	25 35.9‡	22	12	33 35	25 48.8
9	9½	23 50	25 16.9	22	9½	33 37	25 38.0
7	9½	24 25	24 10.8	9	9	33 40	25 10.1
9 22	9	24 52	25 29.2†	7	10	33 54	24 27.5
9	10	25 23	25 18.9§	7	11½	34 2	24 23.2
9	11½	25 39	25 13.1	9	11	34 18	25 26.4
22	12	25 57	25 44.0	22	11½	34 20	25 34.8
9	10	26 5	25 15.2	9	11½	34 24	25 28.8
22	10	26 23	25 43.4†	7	11	34 28	24 21.0
7	12	26 59	24 12.6	7	11	34 43	24 22.9
7	12	27 19	24 12.1	9	12	34 48	25 14.2
9	9	27 21	25 25.8	7	10½	34 55	24 14.8
22	12	18 27 35	—25 49.4	22	10	18 34 56	—25 37.1

* Faint and round. † A. Z. ‡ A. 12½ *p*. § (4.)

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
9	11	18 35 21	—25 16.0	22	11½	18 42 2	—25 45.4
9	11	35 24	25 22.3	22	11	42 12	25 49.5
22	9½	35 32	25 31.9:	7	11½	42 35	24 22.0
22	11	35 38	25 37.5	9 22	10½	42 41	25 32.8
7	10½	35 44	24 17.4	7	9	42 42	24 23.6
7	10	36 6	24 25.2	22	9½	42 59	25 31.4
7	10½	36 10	24 20.2	9	10½	43 11	25 24.4
9	11	36 18	25 27.5	7	11	43 19	24 16.0
22	10½	36 23	25 45.3	9	11½	43 23	25 27.2
9	11	37 17	25 30.1	9	11½	43 36	25 27.6
9	12	37 27	25 24.6	22	12	44 0	25 36.7
7	11	37 40	24 26.6	22	10½	44 2	25 38.8
7	11½	37 56	24 23.5:	22	10	44 20	25 46.5
9	10	38 4	25 22.2†	9	11	44 25	25 26.9
7	11	38 10	24 21.6	7	12	44 28	24 9.5
22	11½	38 12	25 37.1	9	12	44 39	25 24.7
7	11½	38 22	24 19.0	7	12	44 58	24 12.1
9	11½	38 22	25 28.2	22	11½	45 3	25 33.7
22	11½	38 27	25 33.8	7	11½	45 30	24 14.2
9 22	11	38 29	25 32.7	9 22	9½	45 31	25 28.4
22	12	39 15	25 47.1	9	11	45 40	25 13.3
22	12	39 19	25 32.1	22	10½	46 5	25 37.2
9	11	39 33	25 24.7	9	11	46 20	25 16.2
7	11	40 20	24 11.2	9	9½	46 23	25 12.6
22	9	40 24	25 46.6:	9	8	46 47	25 13.9
22	10	40 27	25 47.9	9	10½	46 48	25 11.0
9	11½	40 30	25 14.4‡	22	12	47 0	25 47.5
22	10½	40 32	25 52.6	7	11	47 3	24 14.9
22	11	40 53	25 51.5	22	12	47 5	25 42.3
7	11	40 55	24 23.9	9	10½	47 22	25 15.3
9	10	40 59	25 17.1	7	9	47 33	24 11.4
7	11½	41 1	24 25.2	7	11½	47 36	24 14.0
9	10	41 8	25 19.7†	22	8	47 55	25 39.2*
9	12	41 33	25 27.0	7	10½	48 12	24 14.8
22	11½	18 41 40	—25 45.6	9	11½	18 48 28	—25 26.4

* A. Z. † (4). ‡ L. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
9	11	18 48 32	—25 14.7	9	11	18 54 2	—25 11.7
9	11	48 35	25 30.2	7	11	54 8	24 26.6
22	9½	48 41	25 35.5*	9	11½	54 9	25 11.2
22	10	48 59	25 33.6	9	10	54 30	25 22.7
7	11	49 0	24 25.4†	7	11	54 46	24 9.5
7	12	49 25	24 23.8	22	12	54 55	25 44.0
7	12	49 26	24 18.9	9	11	54 58	25 24.0
9	11	49 30	25 25.7	7	11	55 26	24 27 8
9	11	49 45	25 31·6	9	11	55 49	25 31.0
9	12	49 54	25 24.3	9	11½	55 51	25 25.4
22	12	50 16	25 38.0:	22	9½	55 54	25 42.3
22	11½	50 22	25 36.4	7	11½	56 0	24 24.2
22	9	50 24	25 37.6	7	11	56 9	24 27.6
9	10	50 34	25 14.7	7	11	56 17	24 23.7
22	11	50 58	25 40.0‡	7	11	56 18	24 22.9
7	11½	51 12	24 25.5	9	11½	56 27	25 29.9
22	11	51 40	25 34.4	9 22	11	56 43	25 32.8
9	11	52 5	25 30.3	7	11	57 9	24 29.7
7	11	52 17	24 25.0	9	11½	57 17	25 23.7
7	11½	52 22	24 25.1	9	11	57 19	25 16.1
9	11	52 24	25 24.8	9	11	57 22	25 13.3
7	9½	52 25	24 20.7	7	9	57 43	24 25.1
9	10½	52 26	25 28.8	9	12	57 43	25 14.2
7	11	52 27	24 21.4	7	10	58 8	24 21.5
22	11	52 32	25 45.3	9 22	8½	58 10	25 28.6*
7	11	52 33	24 25.2	7	10	58 13	24 24.7
22	10½	52 35	25 34.2	7	11½	58 17	24 21.3
22	11	52 38	25 42.8	7	9½	58 24	24 20.9
22	11	52 40	25 42.5	7	10½	58 47	24 15.3
22	10	53 15	25 43.6*	9	11	58 53	25 18.2
9	11	53 23	25 28.4	22	9	58 53	25 50.2
7	11½	53 27	24 24.9	9	12	59 5	25 16.9
22	10	53 28	25 44.6	22	9	59 12	25 35.4
9	9	53 33	25 18.9	22	9	59 28	25 29.7
7	11	18 53 42	—24 25.1	22	9½	18 59 54	—25 43.3

* A. Z. † S.*f.* of double. ‡ (4).

Days. Obs.	Mag.	α	δ	Days. Obs.	Mag.	α	δ
		h. m. s.	° ′			h. m. s.	° ′
7	12	19 0 9	−24 23.2	7	11	19 5 53	−24 10.2
22	9½	0 19	25 43.5*	9	11½	6 1	25 27.9
22	12	0 19	25 33.4	22	10½	6 6	25 34.9
9	10½	0 36	25 24.9	9	11½	6 22	25 23.8
7	11	0 37	24 25.7	7	11	6 47	24 23.1
7	10	0 42	24 24.6	7	9	6 49	24 20.5
7	10½	1 5	24 25.1	7	11	6 54	24 21.9
9	10½	1 10	25 26.9	9	11½	6 58	25 24.8:
22	11	1 20	25 33.7	22	10	7 11	25 35.5*
9	11½	1 27	25 13.9	22	10	7 12	25 35.9
9	11½	1 29	25 12.7	9	11	7 13	25 26.8
22	12	1 35	25 33.4	22	12	7 59	25 31.4
9	11½	1 38	25 12.6	9	12	8 7	25 12.2
22	12	1 41	25 35.3	22	11	8 22	25 49.1
22	12	1 58	25 36.1	22	9½	8 27	25 50.0
7	11½	2 0	24 21.1	9	11	8 52.	25 13.8
7	11½	2 9	24 22.6	22	11	9 3	25 35.1‡
22	10	2 11	25 44.7*	9	10½	9 7	25 19.9†
9	11	2 54	25 25.0	22	12	9 9	25 34.5
7	10	3 14	24 13.8	9	12	9 41	25 14.7
9	11	3 17	25 11.9	7	11	9 43	24 13.8
22	12	3 17	25 33.1	22	9	9 45	25 31.9
7	11	3 25	24 14.0	22	9½	9 51	25 34.1
7	11	3 28	24 14.5:	7	11½	10 24	24 24.9
7	11	3 33	24 12.5:	7	11½	10 35	24 26.7
9	11	3 59	25 31.0	9	12½	10 43	25 11.4
7	10	4 8	24 16.5†	9	11½	10 50	25 12.3
22	10	4 8	25 47.1*	22	10	11 12	25 34.7*
22	11½	4 14	25 48.5	22	11	11 12	25 33.8
22	12	4 16	25 44.3	9	10	11 27	25 26.9
9	11	4 36*	25 16.7	7	11	11 37	24 16.7
7	12	4 41	24 25.2	7	11½	11 41	24 23.2
9	11	4 51	25 17.6	22	9	11 46	25 48.3*
9	11½	5 5	25 12.6	22	12	11 50	25 43.6
22	10	19 5 18	−25 35.5	9	11½	19 12 4	−25 17.3

* A. Z. † (4). ‡ L. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
9	10	19 12 16	—25 28.5	22	11½	19 18 30	—25 44.7
9 22	10	12 21	25 28.4	22	11½	18 36	25 45.2
7	10½	12 32	24 21.0	7	10	18 51	24 19.7
7	11	12 55	24 20.0	9	12½	18 54	25 16.3
22	10½	13 6	25 34.8	7	11	19 2	24 9.8
22	10½	13 8	25 35.5	9	12	19 10	25 15.1
22	12	13 15	25 33.4	9	11½	19 50	25 13.9
9	12	13 24	25 27.6	7	10½	20 5	24 15.3
22	12	13 25	25 36.0	22	8	20 5	25 46.2
9	12	13 34	25 29.3	7	12	20 8	24 11.0
7	10	14 11	24 19.8*	9	11	20 22	25 25.5
22	12	14 22	25 43.6	7	9	20 26	24 30.9
22	11	14 22	25 45.5	22	11	20 29	25 39.4
7	11	14 27	24 21.0	22	11	20 52	25 42.6
22	11	14 39	25 42.8	9	10½	20 58	25 18.7
9	11	14 55	25 17.5	22	8½	21 2	25 49.3†
22	9½	14 56	25 37.7†	22	8	21 3	25 44.7†
9	11	14 59	25 25.7	9	10½	21 24	25 24.8
9	11½	15 8	25 18.0	22	9½	21 32	25 53.6†
9	11	15 8	25 24.8	22	8	21 47	25 50.4†
9	11½	15 10	25 25.9	9	11	21 48	25 29.0
9	11½	15 20	25 24.0	7	10½	22 23	24 11.4
7	11	15 29	24 9.4	9	12	22 42	25 16.2
22	11	15 51	25 32.8	22	11½	22 47	25 32.1
9	11	16 32	25 17.9	22	11	22 49	25 33.1
22	11½	16 41	25 33.5	22	11	22 51	25 38.8
22	10½	16 43	25 43.8	9	9	23 8	25 12.7
9	12	16 48	25 27.5	7	11	23 17	24 9.8
22	11	16 48	25 44.4	22	9½	23 38	25 36.9†
22	12	16 52	25 34.7	22	11	23 57	25 47.6
9	11	16 57	25 23.0	22	9	24 0	25 46.2†
7	12	17 0	24 20.6	9	11½	24 8	25 17.8:
9	11	17 18	25 22.4‡	7	11	24 30	24 14.5
7	11	17 24	24 20.2	22	12	24 45	25 33.6
9	11	19 18 29	—25 27.2	22	12	19 24 52	—25 33.7

* (4). † A. Z. ‡ N. of double.

Days. Obs.	Mag.	α.	δ.	Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′			h. m. s.	° ′
22	12	19 25 17	—25 34.1	9	10½	19 32 57	—25 15.2
9	10	26 2	25 26.5	22	9	33 11	25 40.3*
22	12	26 10	25 36.1	22	11½	33 28	25 48.7
22	11½	26 10	25 35.6	7	11½	33 36	24 11.7
9	11½	26 11	25 25.4	7	11	34 49	24 16.4*
22	10	26 25	25 48.5	7	11	35 36	24 24.7
9	10½	26 41	25 24.8	7	11	36 34	24 20.1
22	11	26 59	25 42.8	7	11	37 43	24 28.0
7	10	27 16	24 17.0	7	12	41 55	24 10.2
22	11	27 20	25 35.5	7	11½	41 56	24 12.3
9	12	27 27	25 16.0	7	11½	42 52	24 16.9
7	12	27 31	24 24.2	7	11½	42 53	24 23.4
9	12	27 51	25 18.9	7	10	43 28	24 19.7*
9	12	27 58	25 26.6	7	10	43 54	24 10.6
22	11½	28 15	25 47.3	7	10	45 57	24 15.1
22	9½	28 21	25 30.8	7	10	46 17	24 21.5
9	10½	28 49	25 20.7	7	12	47 51	24 21.1
22	10½	29 20	25 35.9	7	8	51 20	24 21.7
7	10	29 27	24 26.6	7	11	52 19	24 21.7
22	11½	29 55	25 46.7	7	11	53 46	24 27.7
9	11½	30 19	25 18.7	7	11½	54 15	24 9.2
9	10	30 25	25 24.6	7	11½	54 22	24 11.5
9	12	30 35	25 26.9	7	11	54 25	24 21.8
22	10	30 48	25 45.5	7	9½	55 28	24 24.1
7	10	30 59	24 23.5	7	11½	55 32	24 22.9
22	12	30 59	25 45.9	22	10½	55 35	23 3.8
22	12	31 2	25 50.7	22	10	56 10	23 8.3
9	11½	31 6	25 24.2	22	11	56 15	23 10.2:
9	10½	31 14	25 17.3	7	11½	57 19	24 11.2
9	11	31 38	25 14.4	7	11	57 20	24 10.2
9	10	31 57	25 12.5	22	12	58 27	23 8.0
7	11	32 32	24 30.1	7	12	58 32	24 25.3
7	10	32 36	24 12.5	22	12	59 24	23 8.2:
22	12	32 39	25 40.1	22	12	59 27	23 8.5
22	9½	19 32 49	—25 51.0	22	9	19 59 55	—23 7.3†

* (4). † A. Z.

Days. Obs.	Mag.	α. h. m. s.	δ. ° ′
22	9	19 59 56	—23 7.5*
7	10½	20 0 20	24 15.7
7	10	0 21	24 27.4
22	11	1 0	22 53.6
7	10½	1 13	24 22.7
22	11½	1 28	23 11.5
7	10½	1 42	24 21.6
22	12	1 52	22 55.3
7	10	1 55	24 27.6
22	11½	2 13	22 57.6
22	10½	2 46	22 58.0
7	12	2 47	24 12.5
7	12	2 59	24 14.7
22	10½	3 16	23 3.2†
7	11	3 19	24 12.3
22	11	3 32	23 3.4
22	10	3 46	22 53.5
22	10½	5 13	22 50.6
22	12	5 20	22 49.5
22	10½	6 18	23 2.4
22	12	6 25	22 50.6
22	12	7 39	23 8.7
22	12	7 41	23 6.5
22	10	8 27	23 13.7
22	9½	9 4	23 3.7
22	11	9 13	23 10.8
22	11	9 44	23 6.6
22	9	10 44	23 11.7*
22	10½	11 3	23 14.4*
22	10½	11 9	23 9.3
22	11	11 18	23 4.6
22	11	12 39	23 0.2
22	11	13 11	23 1.2†
22	11	13 38	23 0.4†
22	12	20 14 46	—22 56.3

Days. Obs.	Mag.	α. h. m. s.	δ. ° ′
22	11	20 14 58	—22 53.6
22	11	16 6	22 57.9
22	10½	16 29	22 55.5
22	10	16 48	23 3.4†
22	10½	17 3	23 4.5
22	10	17 38	22 55.7
22	9½	18 11	23 2.5*
22	10	19 38	23 10.8
22	11	20 20	23 9.8
22	11½	20 35	23 4.8
22	10	20 46	22 56.6
22	9½	20 59	23 4.9
22	9	21 19	23 0.1*
22	10½	22 0	22 58.6
22	11	22 22	22 55.7
22	9	22 51	23 0.2*
22	12	22 52	23 0.6
22	11½	24 8	23 11.2
22	12	24 40	22 53.9
22	12	24 42	22 54.8
22	11½	24 45	23 0.5
22	10½	25 27	22 55.7
22	11	25 43	23 9.8
22	11	26 3	23 3.8
22	9	26 17	23 6.2
22	11	26 34	23 5.5:
22	11	27 30	23 7.7
22	12½	28 32	22 58.4
22	11½	28 46	22 56.6
22	11	29 58	23 6.2
22	9	30 2	22 50.5*
22	10½	31 26	23 5.7
22	11½	31 42	23 3.7†
22	11½	32 29	23 11.8
22	9	20 33 24	—23 9.6

* A. Z. † (4).

Days. Obs.	Mag.	α.	δ.
		h. m. s.	° ′
22	11	20 56 14	—18 18.1
22	11½	56 18	18 12.5:
22	12	57 56	18 22.1*
22	12½	58 11	18 12.8
22	12	58 19	18 14.1
22	10	59 19	18 6.5
22	12	20 59 51	18 11.5
22	11½	21 0 20	18 15.3
22	11	0 24	18 12.4
22	10	0 30	18 12.2†
22	10½	2 11	18 14.9
22	11	2 24	18 10.6
22	11	3 0	18 20.0‡
22	10½	4 24	18 27.0
22	11	4 52	18 26.4
22	12	5 5	18 24.5
22	9	5 34	18 13.4†
22	9	6 5	18 31.2
22	11	7 45	18 14.1
22	11½	8 9	18 20.4‡
22	12	8 41	18 22.9
22	12	8 54	18 25.8
22	12	10 24	18 20.8
22	12	10 26	18 21.9
22	10	11 2	18 22.4
22	10	11 22	18 15.8
22	9½	11 50	18 25.3
22	11½	11 56	18 21.3
22.	12	13 5	18 10.9
22	12½	21 13 8	—18 9.5
22	11½	21 13 33	—18 14.3
22	12	14 1	18 14.4
22	9	14 12	18 12.9†
22	11½	15 14	18 17.3
22	12	15 45	18 23.4
22	11½	17 30	18 16.0
22	12	17 39	18 27.0
22	11½	19 3	18 15.9
22	10	19 4	18 23.8†
22	10½	19 27	18 23.9
22	12	20 39	18 25.2
22	12	20 53	18 22.1
22	11½	21 59	18 20.3
22	12	22 6	18 16.1
22	12	22 24	18 15.0
22	12	23 30	18 26.5
22	11½	23 46	18 21.8
22	10	24 36	18 13.3:
22	11½	24 58	18 13.9
22	9½	25 41	18 14.4†
22	11	26 0	18 30.5
22	12	26 38	18 13.6
22	12	27 0	18 14.5
22	10½	28 17	18 22.4
22	10	28 17	18 10.4
22	10½	28 50	18 10.2
22	10	29 34	18 11.5
22	12	30 49	18 25.3
22	9	32 15	18 16.4
22	9	21 32 53	—18 13.6

* N. of double. † M. C. ‡ (4).

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69	9	7 37 35	22 54.3	B. Z. 279.
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